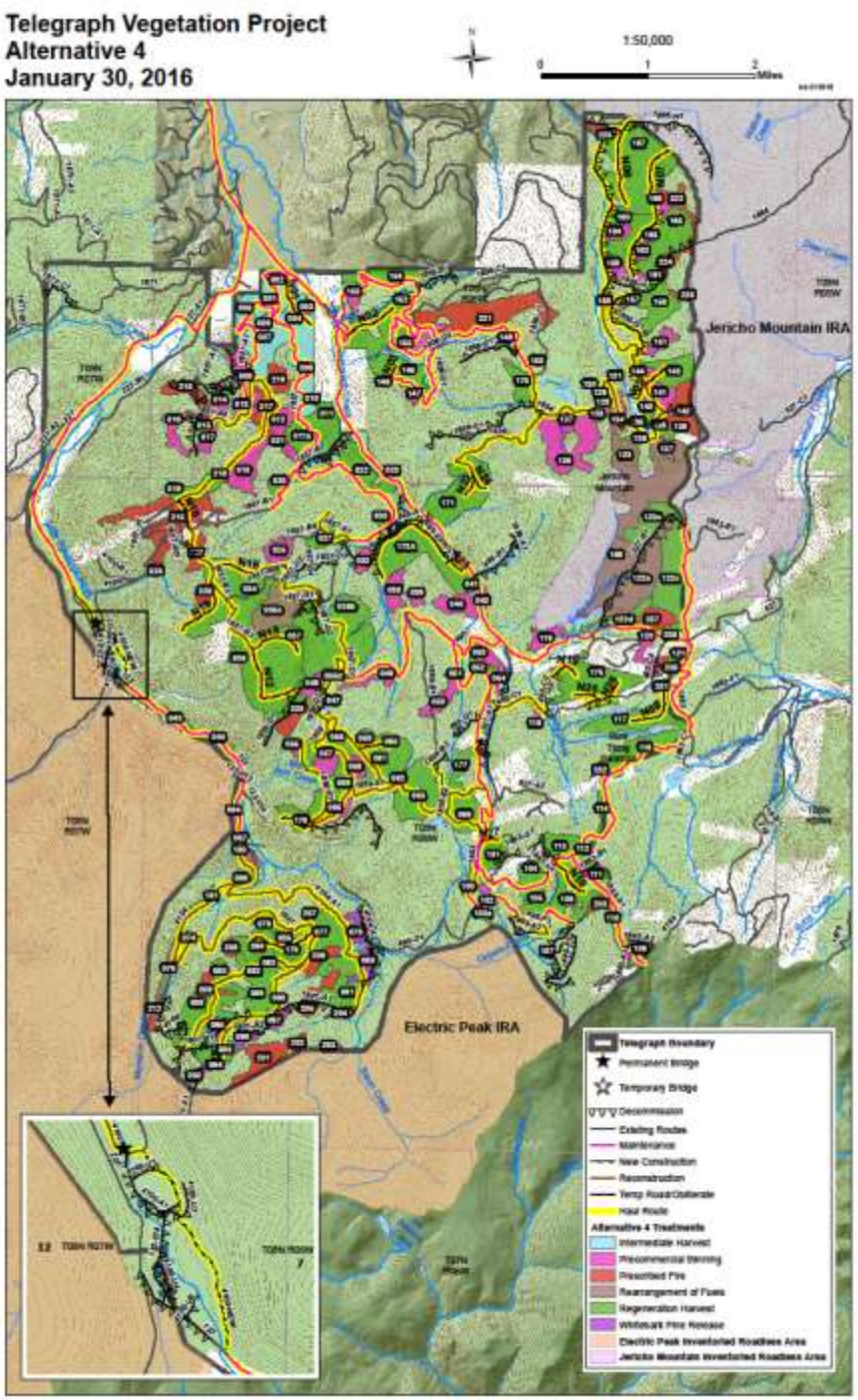
TENMILE-SOUTH HELENA

Elk Need Security COVER

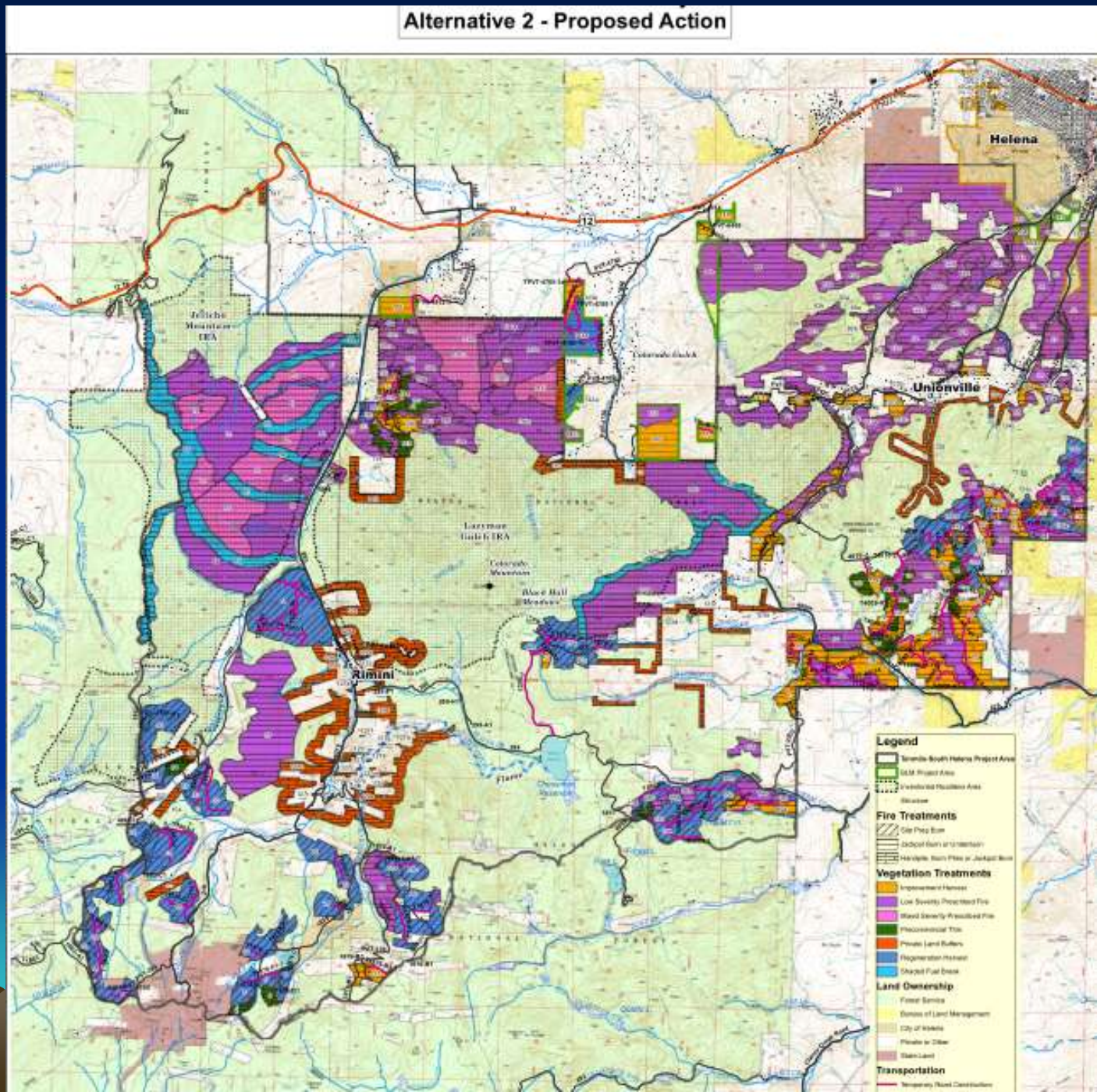
7 Processes/Projects Affecting Wildlife Standards

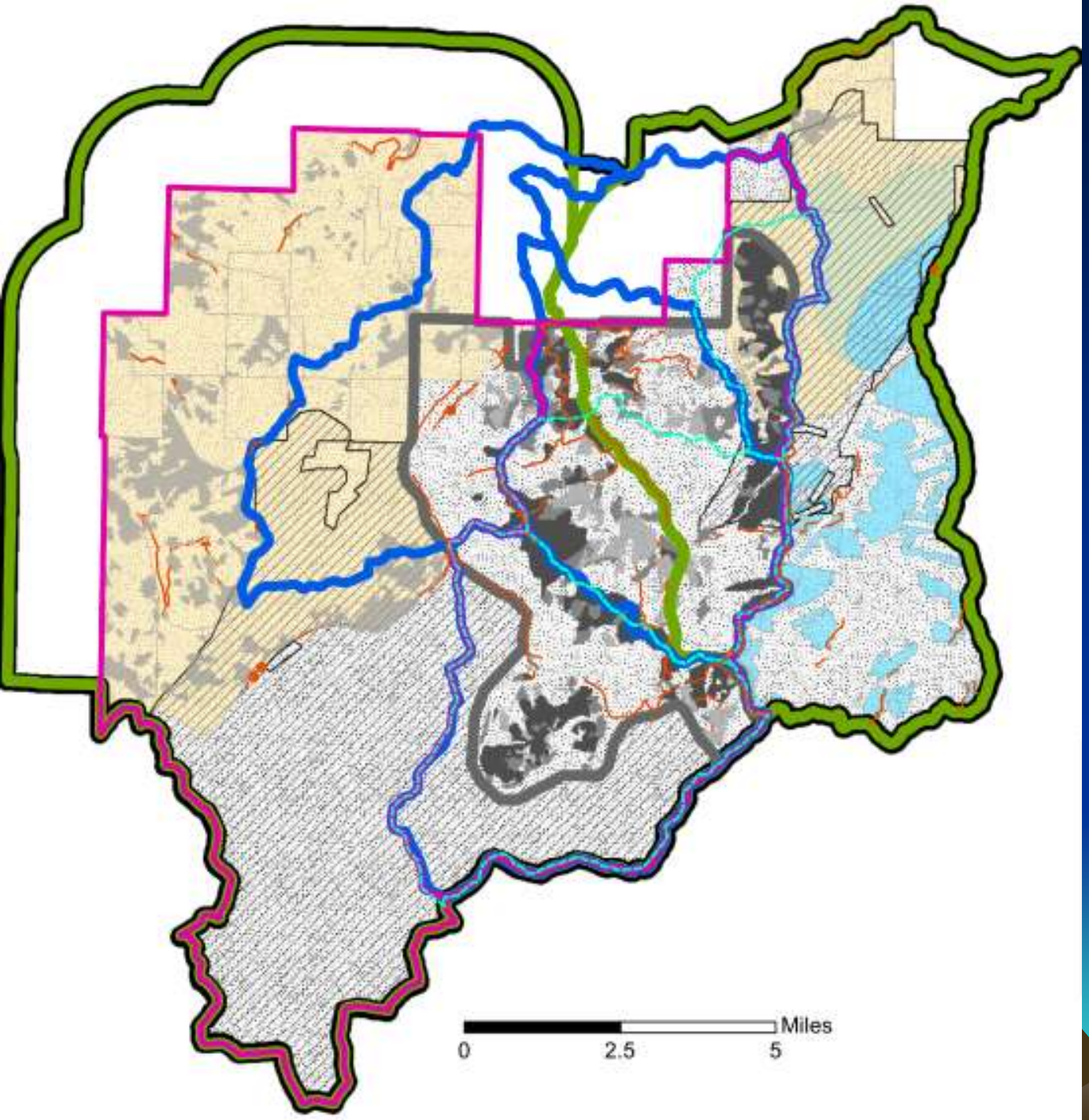
- HLCNF Plan Revision,
- the Divide Travel Plan with its
- Big Game Security amendment,
- the Blackfoot Travel Plan's big game security amendment,
- the Telegraph Project (23,669 acre),
- the Tenmile-South Helena project (61,395 acre) adjoining the Telegraph Project along their common boundary of the Continental Divide (Totaling 133 square miles),
- and cumulative effects of both projects.



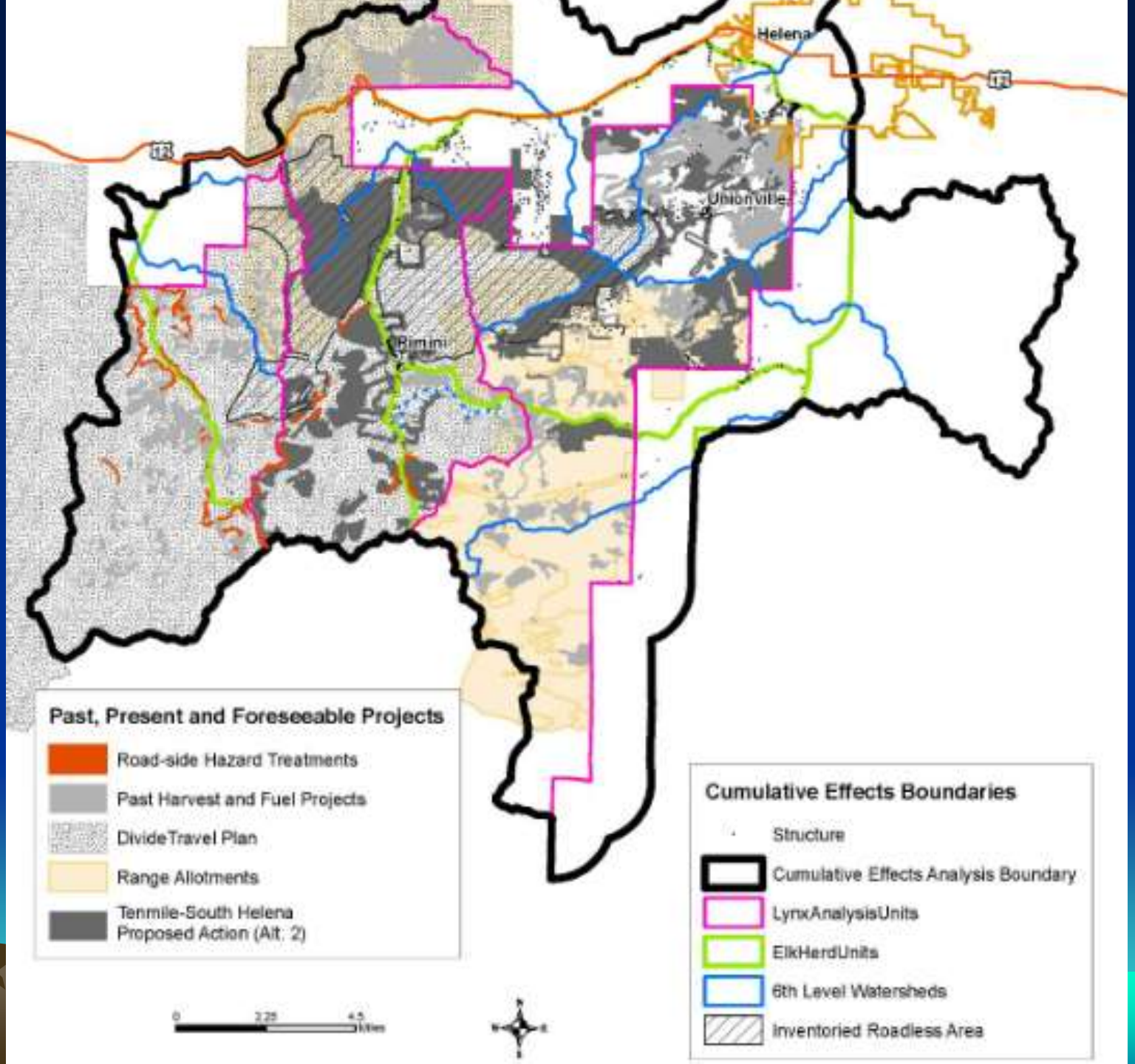
Telegraph Project

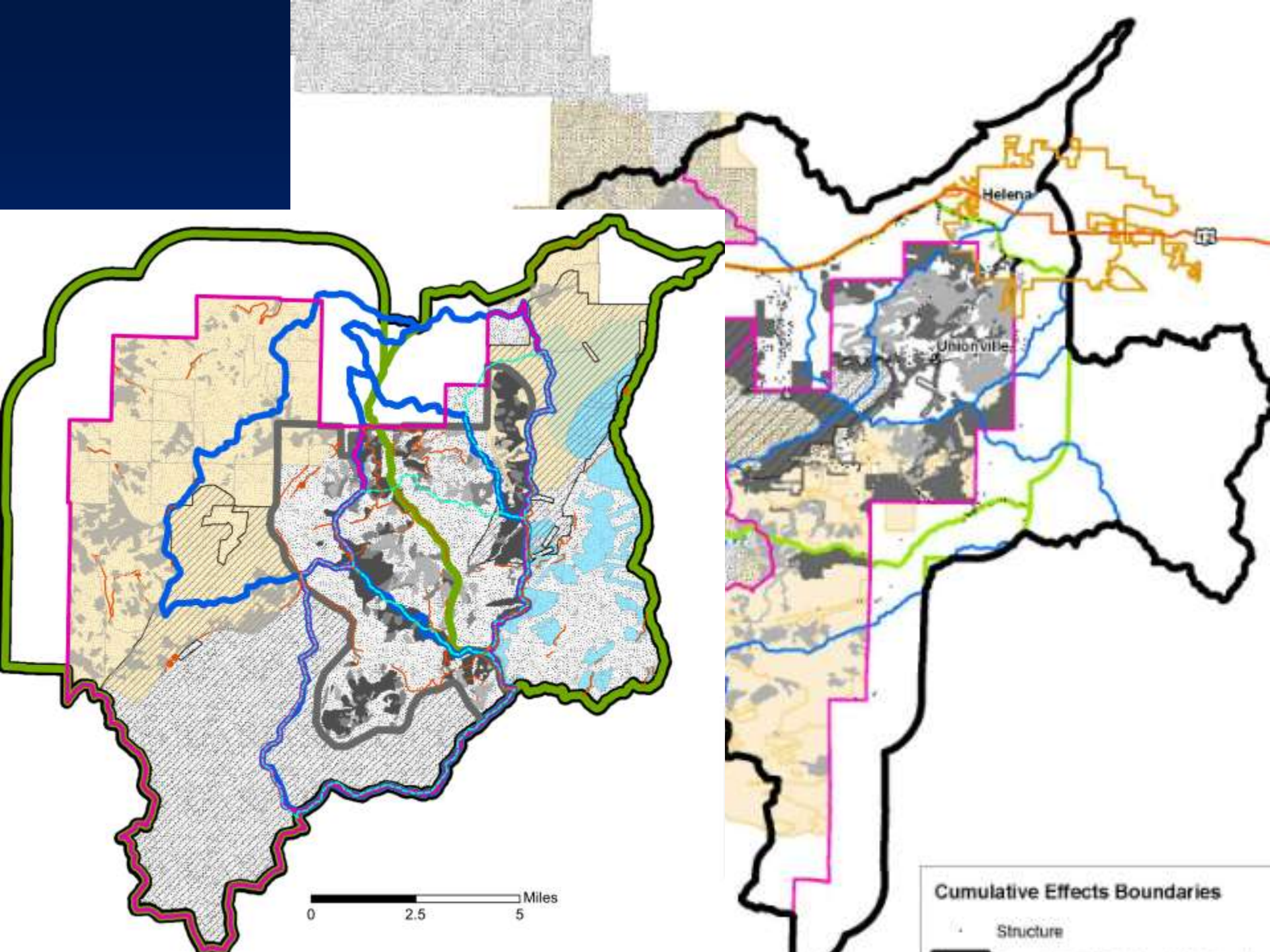
Tenmile-South Helena Project





Telegraph Project


Helena
Unionville
Rimini
12
12
Past, Present and Foreseeable Projects
Road-side Hazard Treatments
Past Harvest and Fuel Projects
DivideTravel Plan
Range Allotments
Tenmile-South Helena
Proposed Action (Alt. 2)
Cumulative Effects Boundaries
Structure
Cumulative Effects Analysis Boundary
LynxAnalysisUnits
ElkHerdUnits
6th Level Watersheds
Inventoried Roadless Area
0
2.25
4.5
Miles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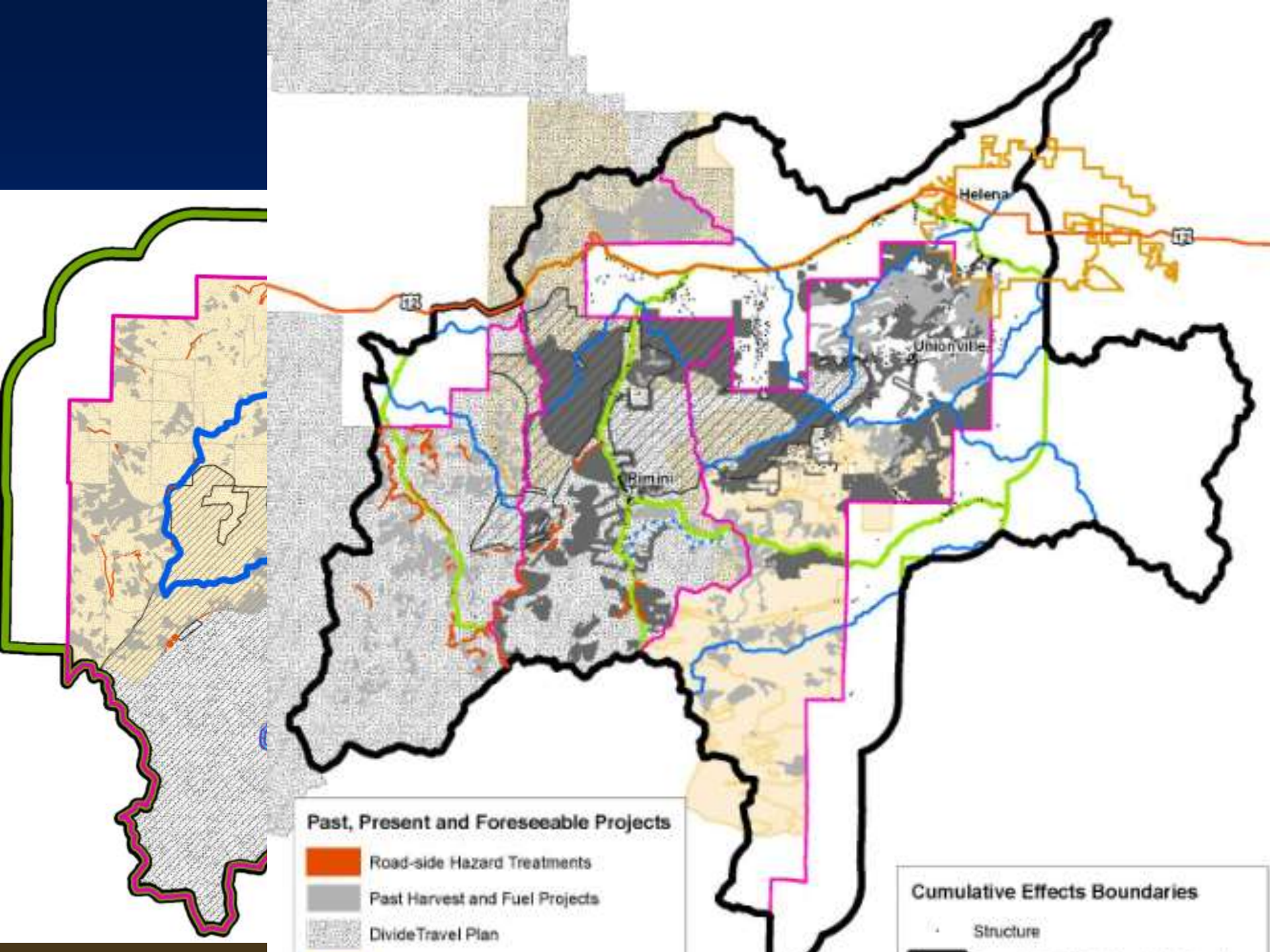
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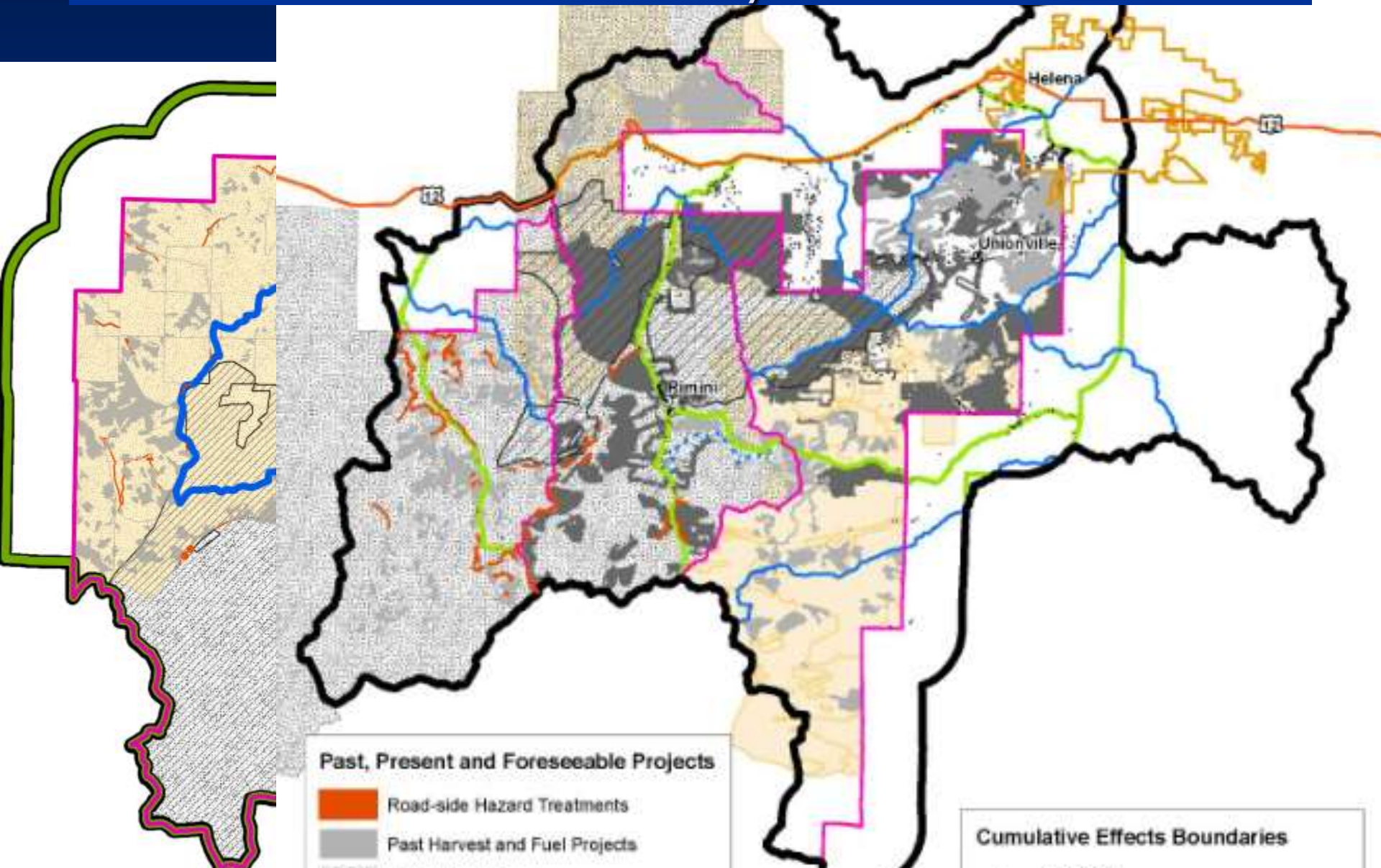
Structure

Combined **Past** Cumulative Effects within Telegraph and TSH Project Areas

- Telegraph
  - Harvest and Fuel Activity = 7,069 ac
- Tenmile-South Helena
  - Harvest and Fuel Activity = 7,015 ac

- TOTAL within Project Areas = 14,084

Combined Cumulative Effects Areas = >20,000 acres



Potentially 32,000 Acres of Impacts to be added to past Impacted Acres More than Doubling Past Harvest and Fuel Activities in all History

Pending Actions

- Telegraph
  - 8,000 acres
- Tenmile-S Helena
  - 24,000 acres

3 security standards in play
Only 1986 has scientific backing
Unnecessarily complicated
Confused?

Tenmile-South Helena Project

- TSH project is being conducted under the authority of the “1986 Forest Plan as amended”
- The standards for big game from the 1986 plan are being used in the DEIS but likely will not be used for the FEIS

Tenmile-South Helena Project

- The 1986 Security Standard is being used to evaluate **Direct and Indirect Effects** of the TSH project (DEIS Chapter 3)

- However, the new proposed amended standard, not the existing standard, is being used to evaluate **Cumulative Effects** for TSH.

HLCNF Proposed

STANDARD
for
ELK SECURITY
=
Proposed Divide Security Amendment

Existing Security Standard 4a

- 4. Implement an aggressive road management program to maintain or improve big game security.
- To decide which roads, trails, and areas should be restricted and opened, the Forest will use the following guidelines developed with the Montana Department of Fish, Wildlife, and Parks (MDFWP). The Forest visitor map will document the road management program.
  - a. Road management will be implemented to at least maintain big game habitat capability and hunting opportunity. To provide for a first week bull elk harvest that does not exceed 40 percent of the total bull harvest, roads will be managed during the general big game hunting season to maintain open road densities with the following limits.

Existing percent hiding cover According to FS definition of Hiding cover1	Existing percent hiding cover According to MDFWP definition of Hiding cover2	Maximum Open Road Density
45	80	2.4 mi/sq mi
49	70	1.9
42	60	1.2
35	50	0.1

1 A timber stand which conceals 90 percent or more of a standing elk at 200 feet
2 A stand of coniferous trees having a crown closure of greater than 40 percent

- The existing hiding cover to open road density ratio should be determined over a large geographic area, such as a timber sale analysis area, a third order drainage, or an elk herd unit.

Proposed Standard

Has no reference to Cover or measurable components.

Text of proposed H-LCNF elk security standard:

Standard

Road management will be implemented to maintain or improve big game security and hunting opportunity.

Road management will also be implemented to maintain or improve big game intermittent refuge areas.

Mechanisms of the Proposal

- The background narrative is long and wandering but is not legally binding
- It has 7 additional parts:
  - Other Uses
  - Emergencies
  - Definitions for terms in the Standard
  - Guidelines
  - Definition for terms in the Guidelines
  - Goal
  - Discussion

Proposed Standard: Other Use

Other Use:

- Administrative use for travel on routes that are closed to public motorized use is permitted subject to existing authorization procedures (i.e. variances approved by line officers are required prior to use of motorized routes closed to the public).
- **Temporary reductions** associated with management activities **in security blocks and intermittent refuge areas between 9/1 and 12/1 are allowed** as long as impacts to elk or elk security are mitigated at the project level.
- **Temporary reductions will be** evaluated and effects analyzed (including cumulative effects) at the project level and reviewed by a wildlife biologist. It is at this scale and time when project design features and/or mitigations would be applied to ensure that impacts to elk or elk security during hunting season are **addressed and reduced during implementation of the project**.
- Temporary reductions are managed at the project scale and at the herd unit (or across herd units where security blocks cross into one or more herd units) to ensure big game security during the 9/1 to 12/1 hunting season is maintained or improved over the long term.
- **Permanent changes** (e.g. **reduction in overall secure acres) are allowed** in elk security areas as long as the overall percent of elk security in a herd unit does not decrease and a site-specific analysis indicates that elk are unlikely to be negatively impacted by that change.
- **Permanent changes are allowed in intermittent refuge areas** as long as the overall percent of intermittent areas in a herd unit does not decrease and a site-specific analysis indicates that elk are unlikely to be negatively impacted by that change OR if the decrease is due to those acres becoming part of a security area.

Proposed Standard: Exceptions

Emergency situations are not subject to this standard.

Not defined.

Proposed Standard: Definitions

- **Security** is defined as a **proportion of an elk herd unit within the administrative boundary** of the Helena Ranger District that consists of an area of at least 1000 acres in size that is at least ½ mile from a motorized route open to the public between 9/1 and 12/1.
- Security blocks are adjusted for constrictions less than or equal to ½ mile in width.
- Security is **calculated across** all ownerships within the **administrative boundary**.
- **Intermittent Refuge Areas** are defined as those areas **at least 250 acres in size** and less than 1000 acres in size that are greater than or equal to ½ mile from a motorized route open to the public between 9/1 and 12/1.
- Intermittent Refuge Areas are adjusted for constrictions less than or equal to ½ mile in width.
- Intermittent Refuge Areas are calculated across all ownerships within the administrative boundary.
- **Administrative use** for travel on motorized routes is defined as vehicle use associated with **management activities** or projects on National Forest land administered by the Forest Service or under authorization of the Forest Service.
- **Management Activities** include but are not limited to, law enforcement, **timber harvest**, reforestation, cultural treatments, prescribed fire, watershed restoration, wildlife and fish habitat improvement, private land access, allotment management activities and mineral exploration and development that occur on National Forest land administered by the Forest Service or under authorization of the Forest Service.
- Mitigation is defined as design elements and/or constraints applied to project level activities that reduce project impacts on elk or elk security.
- Mitigation measures may include but are not limited to one or more of the following: timing restrictions of activities in security blocks, confining activities to one security block at a time, completing as much of the preparatory work as possible prior to the hunting season, reducing the size/acres/intensity/magnitude of the activity, allowing activities that benefit elk (particularly in management areas with a wildlife emphasis), limiting activities to one season, temporarily closing roads open to the public to compensate for the activity, etc.

- Alternative B also includes cover guidelines as follows:

Proposed Standard Terms

- Security Area ≥ 1000 ac (NOT defined by elk)
- Elk Herd Unit (EHU) within Administrative Boundary → EAU
- Intermittent Refuge Area (250-1000 ac)

Proposed Standard: Guidelines

(Not Binding)

- 1. Cover should be distributed in a manner that mimics or approximates a natural range of variation (NRV). NRV is generally defined as the spatial and temporal variation in ecosystem characteristics under historic disturbance regimes during a reference period. A reference period should be sufficiently long to include the full range of variation produced by dominant natural disturbance regimes. Fire, wind and insect/disease outbreaks are examples of disturbances.
- 2. Subject to Guideline #1, **provide cover, if available, between elk security areas** to maintain habitat connectivity and facilitate seasonal movement. Saddles, low divides and heads of drainages are examples of important landscape features within which cover should be retained when possible in order to provide habitat connectivity.
- 3. Subject to Guideline #1, vegetation management projects **should be** planned to recruit or improve cover, where such habitat is limited or not available.
- 4. Subject to Guideline #1, **provide cover, if available, in elk security areas** to maintain and/or improve elk security in areas known to be used by elk or that have the potential to be used by elk. The upper third of the slope in moderate to large drainages and lower third of slope in drainage heads are examples of areas that have the potential to be used by elk.
- 5. Frequent, continuous **dense cover, if available, should be provided adjacent to system roads** within and between elk security areas to maintain habitat connectivity and elk security. 'Dense' cover may include trees, shrubs and/or topography among other factors and is site-specific in nature; as such it is purposefully not defined here.
- 6. Design management activities to avoid reducing hiding cover where recruitment of hiding cover is an objective.

Proposed Standard: Guideline Definitions

- **Cover** is defined as vegetation that provides elk with a means of escape from the threat of predation or harassment and reduces the chance of detection. Here, the definition of cover may include hiding cover, screening cover, or concealment cover.
- **Hiding cover** is defined in the Helena National Forest Plan as either (1) vegetation capable of hiding 90 percent of an elk at 200 feet or (2) a standoff coniferous trees having a crown closure of greater than 40 percent or concealment cover which consists of vegetation dense enough to aid animals in escaping from predation or harassment.
- **Screening cover** may include conifers and other vegetation that afford longer sight distances then hiding cover but that can obstruct a clear view toward standing or moving elk.
- **Concealment cover** may include small conifers, shrubs, boulders, or dead fall that can hide calves/fawns and bedded adults and may service to impede hunter movement.
- Concealment cover is generally more open than hiding cover.
- **Habitat connectivity** consists of an adequate amount of hiding or screening cover arranged in a way that allows elk to move around.
- System Road is defined as a road that is part of the Forest development transportation system.

- Alternative B also includes a goal as follows:

Proposed Standard: Goal

- **Maintain** or, where opportunities arise, improve big game security in those portions of an elk herd unit within the *administrative boundary* of the Helena Ranger District during the 9/1 – 12/1 hunting season **where security is less than 50 percent**.
- Maintain big game security in those portions of an elk herd unit within the administrative boundary of the Helena Ranger District between 9/1 and 12/1 where security is greater than or equal to 50 percent.

Proposed Standard: Discussion

The Forest Plan Standard 4a - Alternative A - was crafted to provide big game security during the hunting season and largely reflected work by Coggins (1976), Basile and Lonner (1979) and Lyon et al. (1985) that was based on a focused road building and timber management program on National Forests in Montana. While this provision remains relevant – i.e. maintaining big game security during the hunting season - the method by which big game security is measured needs to be updated to reflect more recent scientific deliberations and to address shortfalls in the application of the current standard, primarily the fact that the current standard is not a particularly sensitive indicator of changing elk security conditions (See the Purpose and Need and Background/Overview sections). To that end, Alternative B was developed to include consideration of recommendations outlined in the U.S. Forest Service and Montana Department of Fish, Wildlife and Parks Collaborative Overview and Recommendations for Elk Habitat Management on the Custer, Gallatin, Helena and Lewis and Clark National Forests (MFWP and USDA Forest Service 2013).
Alternative B is based on the concept of identifiable security areas. Security areas are intended to reduce elk vulnerability during the elk hunting season and to provide animals the opportunity to meet their biological needs without making large range movements (e.g. to private land where hunting is not allowed or to lower quality habitats) (Lyon and Canfield 1991). This also allows for a more ethical, fair chase hunting experience and for the hunting public to have the ability and real opportunity to effectively hunt and harvest a public resource on public lands.

The concept of security areas is embodied by the “Hillis paradigm”, a paper compiled by Hillis et al. in 1991 as part of an elk vulnerability symposium. The basic tenets of security areas under the “Hillis paradigm” include areas at least ½ mile from an open motorized route and at least 250 acres in size. The authors cautioned that in some cases, distance from open routes and the size of security area blocks may need to be increased depending on local conditions. They also recommended that at least 30 percent of an analysis unit be comprised of security areas. Although Hillis et al. (1991) define security as “non-linear blocks of hiding cover”, they also suggest that effective security areas may consist of several different cover –types if the block is relatively un-fragmented. The studies considered by Hillis et al. were conducted in areas of contiguous forest cover. In their discussion of security areas, Christensen et al. (1993, pp. 4, 5) speak to the significance of cover in this equation and note that where cover is ubiquitous, security can be controlled by road management alone. They recommend that in the more naturally open elk habitat in central Montana cover considerations should extend beyond the hunting season and therefore be assessed at a landscape level (See also Edge et al. 1987). Their data suggest that “elk are less selective about the specific vegetative characteristics of coniferous cover and more responsive to the size of units, connectiveness with adjacent units and the scale of cover on the landscape” (Lyon and Canfield as cited in Christensen et al. 1993, p. 5).

In contrast to the Hillis et al. study areas, the landscape on the Helena Ranger District tends to include both open and closed forested habitat and areas where forests and grasslands are interspersed in a mosaic pattern. As such, consideration of the quantity and quality of forested cover across the entire EHU would be better than defining security areas as "blocks of hiding cover". This would allow for recognition of those situations where a mosaic of forest and/or open habitats exists, but which operationally are secure. In addition, recent analyses of elk habitat selection during the hunting season in Montana (Proffitt et al. 2013) did not show a significant selection for security areas comprised totally of coniferous cover. In addition, the analysis by Proffitt and others showed that security areas as a variable in habitat selection during the hunting season are strongly related to the motorized route variable.

Hillis et al. only speak to "open roads" and "closed roads". They suggest that hunting pressure is concentrated along open roads, but that closed roads located within security areas may increase elk vulnerability by providing walking and shooting lanes. Hayes and others (2002) found that elk mortality in their study area in Idaho was positively correlated with both open and closed road densities. Basile and Lonner (1979) reported that when vehicular travel was restricted, hunters spent more time walking, saw more elk and had greater success which may have been a function of elk staying in the area longer and in greater numbers due to the travel restrictions. Unsworth and Kuck (1991) noted that road closures may have varied effects on animal distribution and hunter use and success. They cite to several studies where road closures allowed elk to remain in more preferred sites for longer periods of time which in turn affected elk mortality by providing easier access to hunters (Irwin and Peek 1979). This may be because elk and hunters were more likely to be in the same places – i.e. areas of low open road densities (Millspaugh et al. 2000).

Still, the bulk of research indicates that elk tend to avoid open motorized routes during the hunting season (Marcum 1975, Lyon 1979, Irwin and Peek 1983, Unsworth et al. 1991, 1993; Canfield et al. 1999, Rowland et al. 2000, 2004, 2005; McCorquodale 2013, McCorquodale et al. 2003, Proffitt et al. 2013, to name just a few). Based on these studies, the Hillis et al. (1991) recommendation to "minimize" closed roads within security areas has been deemed unnecessary in this definition of elk security.

Hillis et al. (1991) also recommend identifying security areas within the hunting season home range. In practice on the Helena Ranger District, elk have the potential, depending on weather and other conditions, to use the entire breadth of elevations within their home range during the big game archery and general rifle hunting seasons. Therefore, it is not necessary or possible to identify a consistently "separate" fall use area within an EHU.

Despite these specific recommendations, Hillis et al. emphasize that "strict adherence to the guidelines should be avoided" (Hillis et al. 1991). To that end, the parameters in Alternative B reflect the broader collaborations outlined in MFWP and USDA Forest Service (2013).

The Hillis Paradigm was tested on the Bighorn National Forest which has landscape conditions similar to the eastside of the Helena National Forest but not necessarily within the Divide landscape, which resides both west and east of the Continental Divide under more favorable growing conditions. The Rocky Mountain Elk Foundation and Wyoming Game and Fish Department (described in Jellison 1998 and Wyoming Game and Fish Department 2004) attempted to modify the security parameters identified in Hillis et al. to include larger forested patches and greater distances from open roads. They found that few areas met the 30 percent security levels identified in the Hillis Paradigm., most likely due to the open nature of the landscape. They concluded that the 30 percent ecommended threshold may not be applicable to some landscapes and that other factors need to be considered in determining if an area is secure (Jellison 1998, p. 5).

In the U.S. Forest Service and Montana Department of Fish, Wildlife and Parks Collaborative Overview and Recommendations for Elk Habitat Management on the Custer, Gallatin, Helena and Lewis and Clark National Forests MFWP biologists advocated for a 'hunting season' that included the archery season as well as the general rifle season when analyzing elk security. They cited a consistent increase in the number of archery hunters (doubling between 1990 and present) (see also Proffitt et al 2013 and Grigg 2007) and subsequent increased levels of motorized use during the archery season. Through collaboration with MFWP and review of public comments it was recognized that vehicle traffic associated with the archery season displaced elk and compromised elk security. MFWP cited a consistent increase in the number of archery hunters (doubling between 1990 and present) and subsequent increased levels of motorized use during the archery season. This is supported by recent studies that documented the effects of archery season on elk movement (Conner et al. 2001, Vieira et al. 2003) and on elk pregnancy rates (Davidson et al. 2012).

Factors that increase the effectiveness of security areas include large size, plentiful forest cover, minimal trails and old roadways, rugged terrain and heavy deadfall and so on. All of these factors may influence the ability of an area to hold elk through the hunting season; through collaboration with MFWP, the key component was determined to be size. Accordingly, the minimum size of an "elk security area" was set at 1,000 acres, considerably larger than the 250 acre minimum recommended by Hillis et al. (1991) for "westside" forests. This is an adjustment for "eastside" cover conditions and it also aligns with the 1,000-acre security area minimum recently established for the Blackfoot Non-Winter Travel Plan Area on the Lincoln Ranger District just to the north (USFS 2014).

A number of smaller habitat blocks (between 250 and 1,000 acres) that have been classified as security areas in past analyses are now designated as “intermittent refuge areas”. While most of these areas are probably too small to hold elk securely throughout the hunting season, they serve as temporary refuges for hunted animals and in parts of the Divide landscape, they represent the only escape areas available (Figure 68 to Figure 72). While their acreages are not added into the security area total for a given elk herd unit, they have been mapped and noted as areas that need to be managed for elk security.

While the new Forest Plan Programmatic Amendment does not require that elk security areas provide a particular level of hiding cover, it does recognize forest cover as an important component of security and includes a set of guidelines for managing cover. The guidelines focus on maintaining cover to the extent practicable where it exists within security areas and in travel lanes between them. Where cover is not available, the guidelines emphasize managing for its recruitment. Abundant cover is most valuable in areas known to be frequented by elk: saddles, low divides, drainage-heads, riparian/ wetland sites and the upper third of slopes in large drainages. These guidelines do not apply to areas where hiding cover has not been abundant historically because of intrinsic environmental conditions (primarily in dry grasslands and shrublands and in dry Douglas-fir and ponderosa pine forests).

The guidelines also recognize that forest cover that is not dense enough or tall enough to provide classic hiding cover may still provide screening or concealment in certain circumstances or otherwise allow animals to elude hunters.

The goal of the standard is to maintain or improve elk security in herd units where security/refuge areas occupy less than 50 percent of the unit. Where percent security is greater than 50 percent, the goal is to keep it above that level. Any decrease in security acreage in herd units that are under 50 percent, would represent non-compliance with the standard. Herd units would remain in compliance as long as security acreage holds steady or increases. The 50 percent security area level (considerably higher than the 30 percent recommended by the Hillis group) is based on what has been deemed desirable and achievable in the Blackfoot landscape just to the north [Blackfoot Non-Winter Travel Plan FEIS, 2014]. For the sake of consistency, the 50 percent goal has been applied to the Divide landscape as well, although it’s recognized that, given the entrenched nature of the State, County and Forest road system in the landscape west of Helena, this percentage is unachievable on all but perhaps two of the 6 Divide herd units. The fact that herd units are below 50 percent security does not necessarily mean that they are out of compliance with the standard.

Alternative B would confine the security analysis to that portion of the EHU that occurs within the Helena National Forest administrative boundary and includes private land within that confine. This analysis boundary reflects transitional range and in some EHUs the upper edge of winter range and is biologically meaningful (Edge et al. 1986, Lyon and Christensen 1990, Hillis et al. 1991) for the purposes of this amendment. The portion of the herd unit within the administrative boundary is that area where MFWP and the Forest would like to retain elk in the hunting season – i.e. public land open to all hunters (where the Forest Service has management control and the ability to close roads). By excluding from the security calculation those portions of the herd units that lie outside the Forest boundary, we have omitted security provided by private lands on which public hunting is barred and on which elk have been learning to seek refuge with increasing frequency.

MFWP and the Forest feel that relying on these sanctuaries for security is undesirable since it decreases public hunting opportunity. In addition, the status of private lands can be in flux over the long term, depending on landowner decisions that may have little consideration for the welfare of elk. However, for the purposes of analyses and cumulative effects of past, ongoing and reasonably foreseeable activities, the herd unit will continue to serve as the basis for those analyses.

Furthermore, current herd units in the Divide landscape are quite large; even the portion of the herd unit within the administrative boundary tends to be larger than average home range sizes reported for elk in a variety of studies. Craighead et al. (1973, p. 20) reported an average composite home range of 16 square miles or 10,240 acres in the Madison Range in Montana. Edge et al. (1985) reported home ranges of approximately 10,900 11,100 acres in western Montana. Unsworth et al. (1998) reported home ranges of approximately 17,000 acres in Idaho. The portions of the herd units within the administrative boundary in the Divide landscape range from 21,000 acres to over 60,000 acres (See Table 137).

Because elk serve as an indicator species and often management for elk serves as a proxy for other big game species, the retention of other Forestwide and Management Area big game cover standards will address cover needs of other species.

Proposed Standard

ONLY the language in the Standard itself is enforceable. In the proposal there are no measurables:

Road management will be implemented to maintain or improve big game security and hunting opportunity.

Road management will also be implemented to maintain or improve big game intermittent refuge areas.

Concepts in Guidelines, Goals, Discussion are ***optional***.

The new, proposed standard will not be adequate because:

~ “screening cover”, “concealment cover” are not actually in the standard

~ Intermittent Refuge Areas - no binding acreages

~ Security Areas are polygons defined by people not by elk, are too small, and do not incorporate “habitat needed by elk during the fall hunting season”

The proposed standard has gone through several iterations, and changes from project to project, i.e. the Divide Elk Security Standard is not the same as the Blackfoot Elk Security Standard.

Existing Security Standard 4a

- 4. Implement an aggressive road management program to maintain or improve big game security.
- To decide which roads, trails, and areas should be restricted and opened, the Forest will use the following guidelines developed with the Montana Department of Fish, Wildlife, and Parks (MDFWP). The Forest visitor map will document the road management program.
  - a. Road management will be implemented to at least maintain big game habitat capability and hunting opportunity. To provide for a first week bull elk harvest that does not exceed 40 percent of the total bull harvest, roads will be managed during the general big game hunting season to maintain open road densities with the following limits.

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1 A timber stand which conceals 90 percent or more of a standing elk at 200 feet
2 A stand of coniferous trees having a crown closure of greater than 40 percent

- The existing hiding cover to open road density ratio should be determined over a large geographic area, such as a timber sale analysis area, a third order drainage, or an elk herd unit.

Existing vs. Proposed Standard

- Existing Standard:
  - 1 page
  - Specific measurable parameters that can be MONITORED
- Proposed Standard:
  - 7 pages (in Divide Travel Plan FEIS)
  - Standard itself is non-specific without parameters
  - 6 pages of caveats in the form of **optional** guidelines and discussion
  - will be extremely difficult to track and monitor

Tenmile-South Helena Project

Both the existing standard and proposed 'no cover' amendment are being used even though the DEIS says:

"the 1986 Forest Plan as *amended"* will be followed

(Security amendment has not been signed so it is not part of "the amended 1986 plan" but its terminology is used throughout the DEIS)

* *

Tenmile-South Helena Project

- The 1986 Security Standard is being used to evaluate **Direct and Indirect Effects** of the TSH project (DEIS Chapter 3)

- However, the no cover proposed standard, not the existing standard, is being used to evaluate **Cumulative Effects** for TSH.

Gayle Joslin

- Degrees in Wildlife from MSU
  - Bachelor of Science in Wildlife Management
  - Master's Thesis:
    - "Behavioral and Environmental Selection by Elk during Summer and Fall"
- Certified (TWS) Wildlife Biologist for State of Montana
  - 1975-1977 Grizzly Bear Research
  - 1977-2007 FWP Wildlife Management Biologist
- President
  - Montana Chapter of The Wildlife Society
  - Montana Association of Fish & Wildlife Biologists
- Publications and White Papers 45+
- Awards
  - Wildlife Management Institute's 2001 *Touchstone Award* "for advancing sound resource management and conservation in North America."
  - Bob Watts Communications Award 2000, Montana Chapter of The Wildlife Society
  - Les Pengelly Professional Wildlife Biologist of the Year Award, Montana Wildlife Federation
  - The Fred Carver Sportsman of the Year Award 2012, Montana Wildlife Federation
  - The Len and Sandy Sargent Conservation Award 2013, Cinnabar Foundation
- "Retired" 2007 but volunteering on behalf of functional landscapes for wildlife and ecosystem services for people

Concerns of Objectors
Rod & Gun Clubs and Local Citizens

- Helena Hunters and Anglers Association
- Montana Wildlife Federation
- Anaconda Sportsman's Association
- Clancy-Unionville Citizen's Task Force
- Backcountry Hunters and Anglers

Position of
Rod & Gun Clubs and Local Citizens

Elk Need COVER

Specifically forested Cover, ie.
TREES

Sent via:
Email: appeals-northern-regional-office@fs.fed.us
and U.S. Mail

May 9, 2014

USDA Forest Service
Northern Region
ATTN: Objection Reviewing Officer
P.O. Box 7669
Missoula, MT 59807

Subject: Objection to Big Game Security Forest Plan Amendment for *Blackfoot* Non-winter Travel Planning

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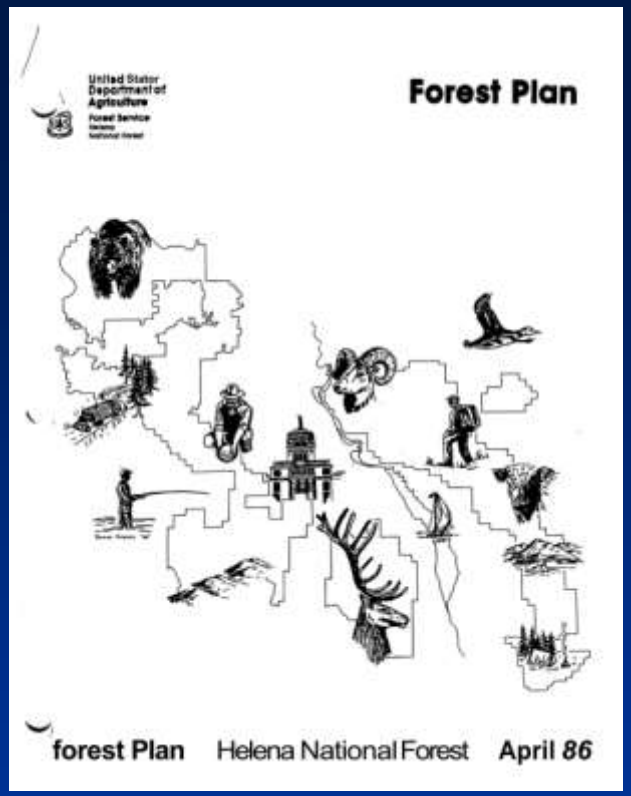
June 19, 2015

Objection Reviewing Officer
USDA Forest Service
Northern Region
P.O. Box 7669
Missoula, MT 59807

OBJECTION to Programmatic Plan Amendment for Big Game Security Forest Plan Standard 4a *Divide* Travel Plan
Helena Ranger District, Helena National Forest



HNF says it can no longer meet its Forest Plan Standards for Big Game Security Habitat

SEASONAL TERMS

Habitat Effectiveness = Spring/Summer

Security = Fall

Thermal Cover = Winter

Big Game Standard 3: Summer and Winter range

- Summer Hiding Cover: “35% hiding cover (meaning vegetative cover that will screen 90% of an elk at 200 feet (or 50% crown closure using MFWP criterion) on summer range. Hiding cover must be in blocks of at least 40 acres to be tallied as Forest Plan hiding cover. For TSH, both action alternatives would result in the reduction of hiding cover but not to the extent that the affected herd units would fall out of compliance.”

- Winter Thermal Cover: 25% or greater in elk herd units. Alts 2 and 3 would further reduce thermal cover and would be out of compliance

Big Game Standard 4a
Fall Security

- Big game security would fall below compliance in all action alternatives, so the FS would implement a

  SITE-SPECIFIC EXEMPTION

  to this standard for entire duration of this project.

*

PROPOSED SECURITY STANDARD

does not provide for ***any*** vegetative cover

Public Lands Managed for **NO** Security Cover:

- Displace elk thus impacting Private Landowners
- Reduces hunter opportunity
- Results in over-harvest of bulls on public land
- Ham-strings FWP management of populations

History of Elk Security Research

- Most research has been conducted in the past 45 years – coincident with the boom in road proliferation for timber sales and then recreational vehicle usage.
- All of that research assumes that vegetative COVER is a given
- Only NOW is the abandonment of vegetative COVER being suggested by the U.S. Forest Service

Independent Record October 17, 2015

"We know there's a big concern not having a cover component," Pengeroth said. "A guideline does give us more flexibility, but it's also then incumbent for the project biologist to articulate why it is not met."

Montana Elk Plan

"In areas with substantial ***hiding cover***, elk security can be controlled by road management alone (Unsworth et al. 1993).

In areas with less *hiding cover* and relatively gentle terrain, the patch size, connectiveness and total amounts of ***hiding cover*** are very important components of elk security (Hillis et al 1991, Lyon and Canfield 1991, and Hamlin and Ross 2002)."

Forest Plan Standard

2012 Planning Rule

(page 21264 of the Fed Register):

"a mandatory constraint on a project and activity decision making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements."

Forest Plan Guidelines

- Guidelines. A guideline is a constraint on project and activity decision making that allows for departure from its terms, so long as the purpose of the guideline is met.
- (§219.15(d)(3)). Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.

2012 Planning Rule (cont.)

- §219.8 Sustainability.
- The plan must provide for social, economic, and ecological sustainability within Forest Service authority and consistent with the inherent capability of the plan area, as follows:
- (a) Ecological sustainability. (1) Ecosystem Integrity. The plan must include plan components, including standards or guidelines, to maintain or restore the ecological integrity of terrestrial and aquatic ecosystems and watersheds in the plan area, including plan components to maintain or restore structure, function, composition, and connectivity, taking into account:
- (i) Interdependence of terrestrial and aquatic ecosystems in the plan area.
- (ii) Contributions of the plan area to ecological conditions within the broader landscape influenced by the plan area.
- (iii) Conditions in the broader landscape that may influence the sustainability of resources and ecosystems within the plan area.

OBJECTION RESOLUTION

Our suggested over-arching remedy is:

- to default to the existing forest plan standard 4a for big game security, implement hunting season dates inclusive of the archery season, 9/1 to 12/1
- initiate an effort to evaluate Helena National Forest's various landscapes' abilities to meet their respective biological potential to produce vegetation capable of providing hiding cover;
- then based on this information, establish a minimum percentage of each landscape's biological potential to produce hiding cover that would be important in meeting the security needs of big game;
- ultimately, greater than some minimum percentage of each landscape's biological potential to produce hiding cover, would be applied in conjunction with a prudently monitored and responsively managed transportation system.

[Taken from Wyoming F&G Recommendations by Jellison 1998]

HOW DID WE GET TO THIS POINT?

- 30 Year History (we have personally been involved here on this Forest for >30 yrs)
- Cumulative actions taken by FS have jeopardized cover
- Justification to abandon COVER = pine beetles (straw dog) (but the real issue is that the timber program conflicts with the elk security standard)
- Efforts to change security standard has been going on for years (since the 90's -- years before the pine beetle arrived; there has been years of cumulative diminishment of cover through management actions)
- Scientific literature – forest cover is the foundation of big game security (We as sportsmen and scientists intend to defend the literature regarding security cover.)

HNF has not lived up to the Elk Security Standard in the existing Forest Plan

The original 1986 standards were based on published scientific information (references provided)

The HNF has now decided to create a new Security Standard without scientific data to show that the substitute is valid.

Living up to the 1986 Elk Security Standard

- Without exception, Decision Notices for timber sales on the Helena National Forest have declared that big game security would not be substantially harmed by projects. And so… project after project have occurred
- But now, the Forest tells us that the old security standard is no longer relevant and that the "existing standard needs to be revised to address recent elk management challenges"

Elk Management challenges materialize when public lands fails to provide suitable or adequate habitat.

On National Forest lands, a typical decision states:

“My decision complies with the Forest Plan standard for big game hiding cover and open road density.” Record of Decision – Clancy-Unionville Vegetation Manipulation and Travel Management Project 2003

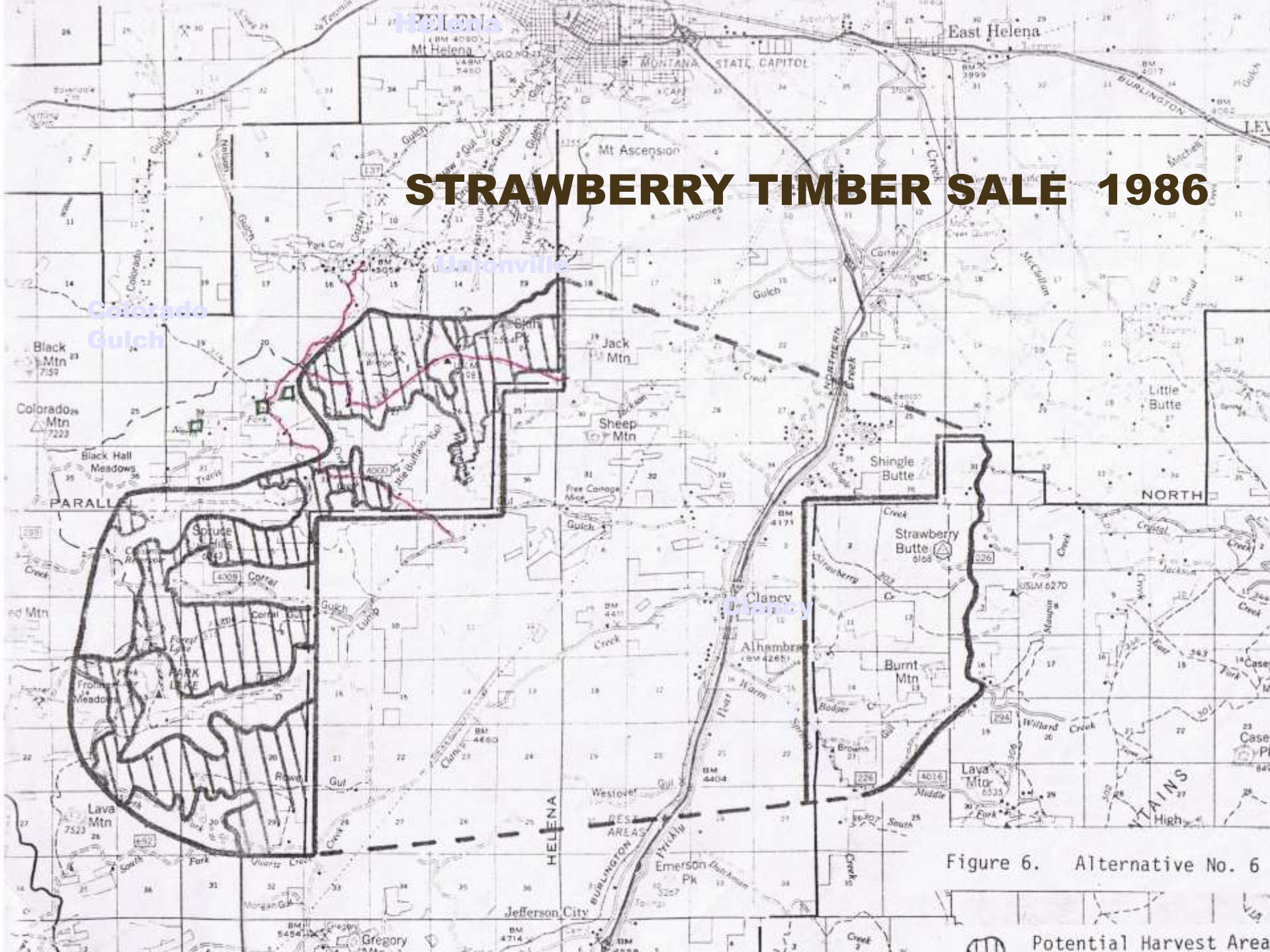
Cumulative Project Effects on Security South Helena

- **Whitemain-Go Devil (1971)**
  - **12 units; 282 acres; clearcut**
  - Revegetation was very slow because the units were clearcut and the south-facing, sun-baked sites were too hot to regenerate for more than a decade.
- **Lump Gulch-Frohner Basin Timber Sale (1973): also included N Fk Quartz Cr**
  - **11 units; 510 acres; clearcut (some 80 acres in size)**
  - Roads were not closed or reclaimed
- **Strawberry Timber Sale (1986)**
- **Lava Mountain Timber Sale (1993)**
- **Clancy-Unionville Vegetation Manipulation Project (2003 - 2016)**
- **Hazard Tree Removal (2010)**
- **Clancy-Unionville Salvage Sale (2012)**
- **N. Fk Travis Salvage Sale (2012)**
- **Red Mountain Flume – Chessman Reservoir Project (2014)**
- **Telegraph Project (DEIS 2016)**
  - **24,000 acre Project Area**

Tenmile-South Helena Project (DEIS 2016)

- **61,000 acre Project Area**

STRAWBERRY TIMBER SALE 1986



Decision Notice
Strawberry Timber Sale
Management Requirements and Constraints

Management Requirements and Constraints:

- **All roads used strictly during logging of the area and then closed off for further use should be revegetated after the road is closed. This will prevent the loss of erodible fills from the road.**

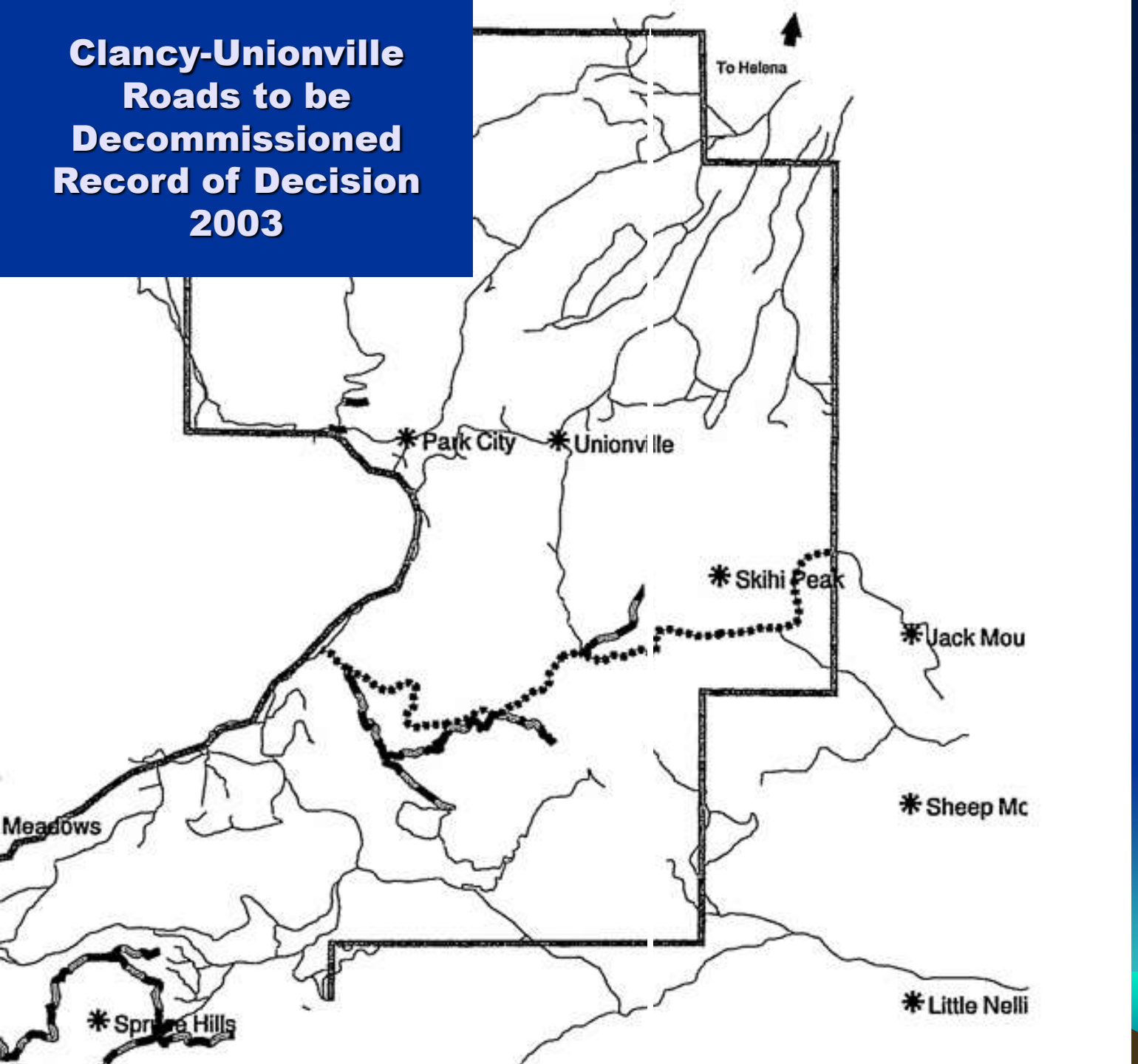
- **To insure that road density and hiding cover changes will not decrease the habitat effectiveness in the analysis area, all newly constructed roads will be closed. *Some existing roads* which are contributing to resource damage, will be closed. This will include … the Skihi Peak road (among others).**

- **The impact on elk security in this alternative will be mitigated by closing new road access and *maintaining hiding cover above 60%* … Lazyman/Black Mountain/Colorado Mountain Habitat Analysis Units**

“My decision complies with the Forest Plan standard for big game hiding cover and open road density.” Record of Decision – Clancy-Unionville Vegetation Manipulation and Travel Management Project 2003

“Establishment of a non-motorized system … the Brooklyn Bridge Road (5 miles) will be converted from a road to a non-motorized trail. A single track will be left.”

Clancy-Unionville Roads to be Decommissioned Record of Decision 2003



Promises made in Decision Notices 1986 and 2003

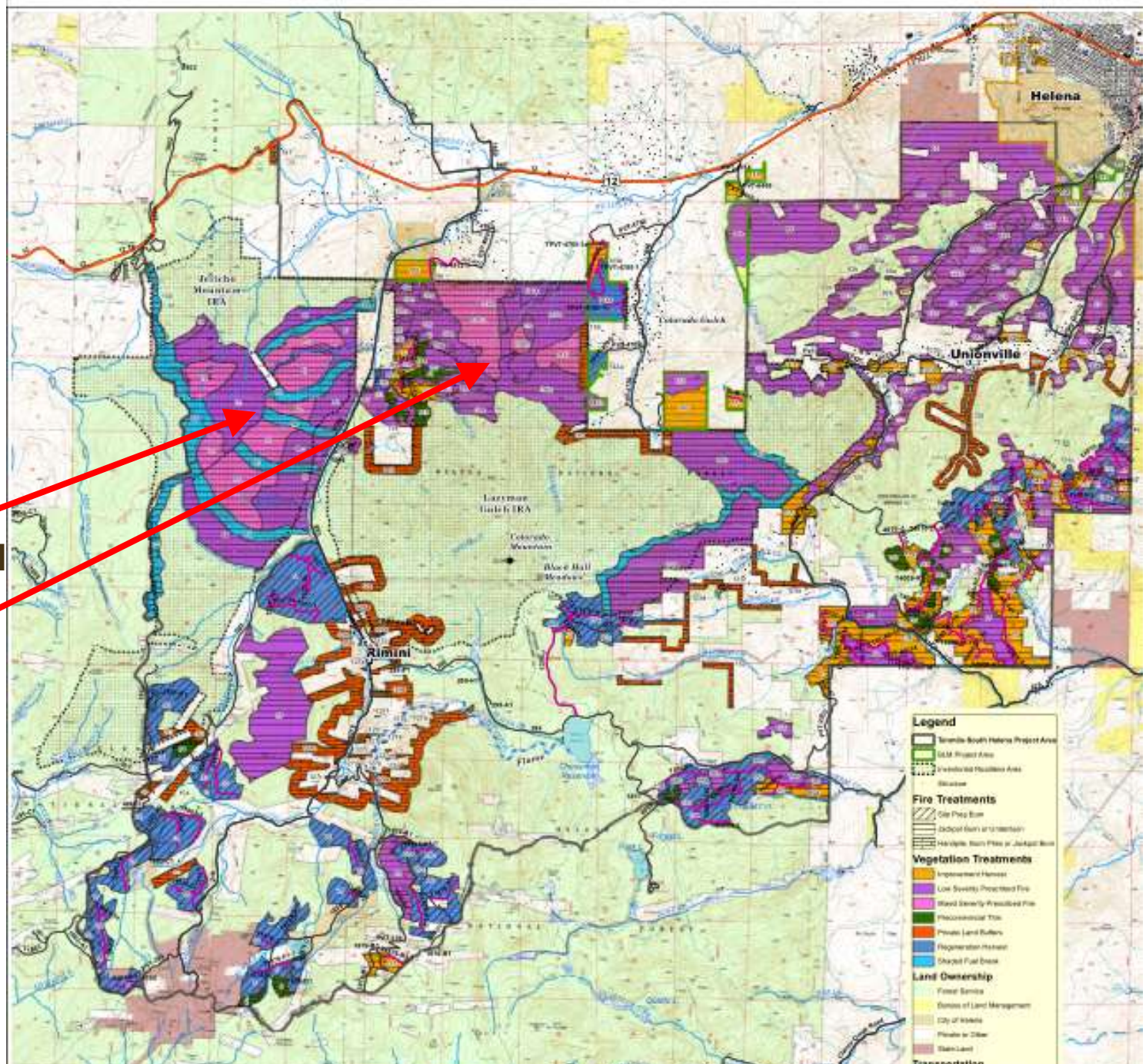
- **1986 "Some existing roads which are contributing to resource damage, will be closed. This will include … the Skihi Peak road (among others)."**

- **2003 "The Brooklyn Bridge Road** [aka Skihi Peak] **(5 miles) will be converted from a road to a non-motorized trail."**

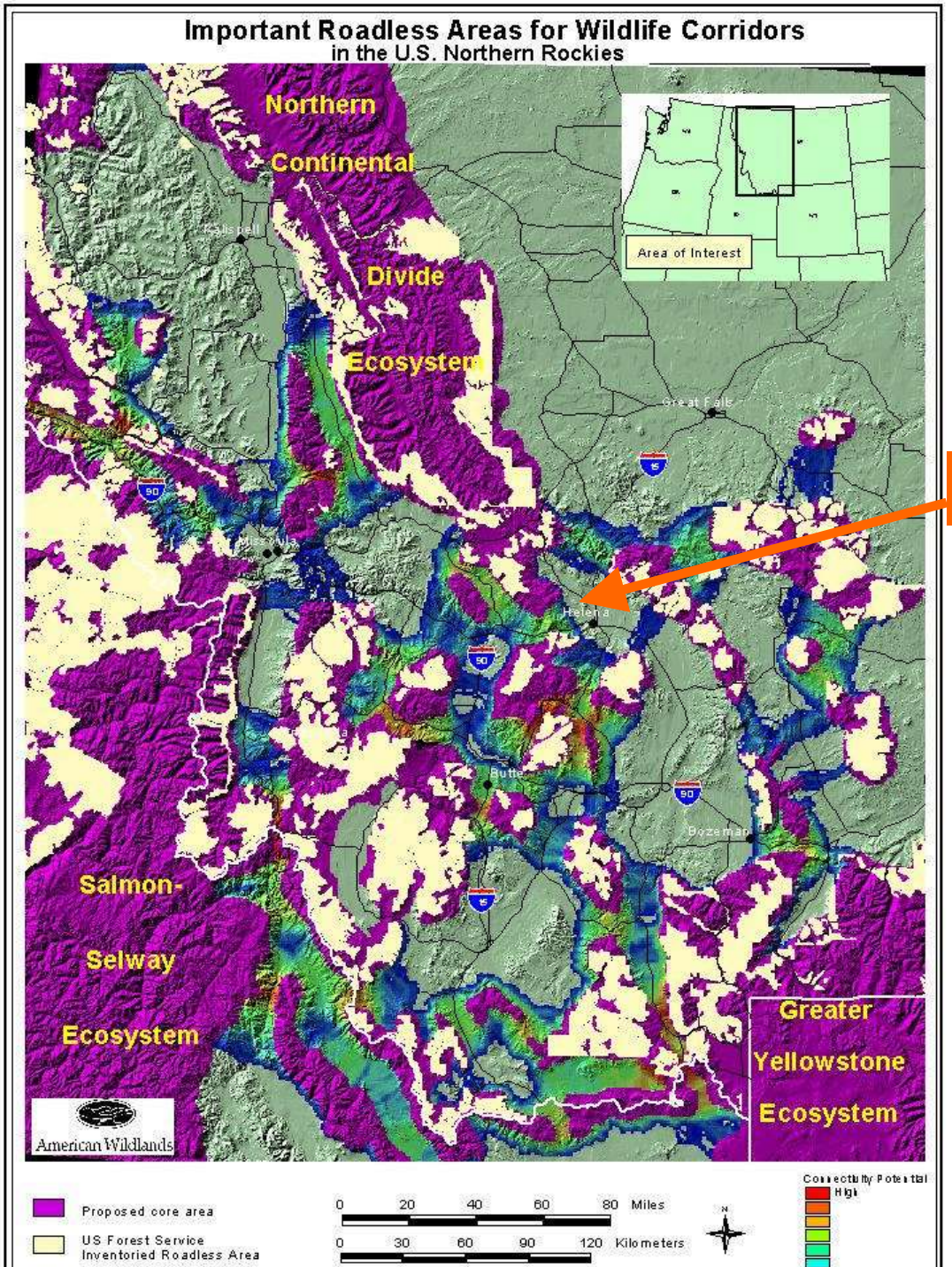
- **2016 Tenmile-South Helena wants to continue to use the SAME Skihi Pk road for 15 yrs**

[Now in 2016, we are 30 years out from the first promise, and 13 past the second]

Alternative 2 - Proposed Action



Inventoried Roadless Areas


Important Roadless Areas for Wildlife Corridors
in the U.S. Northern Rockies
Northern
Continental
Divide
Ecosystem
Area of Interest
Great Falls
Helena
Butte
Bozeman
Salmon-
Selway
Ecosystem
Greater
Yellowstone
Ecosystem
American Wildlands
Proposed core area
US Forest Service
Inventoried Roadless Area
0 20 40 60 80 Miles
0 30 60 90 120 Kilometers
Connectivity Potential
High

Helena

Chief of US Forest Service
Jack Ward Thomas

"And so the corruption of principle and idealism continues, and it comes not in great confrontations but little by little by little."

Jack Ward Thomas -- *The Journal of a Forest Service Chief*

HNF has not lived up to the Elk Security Standard in the existing Forest Plan

The original 1986 standards were based on published scientific information (references provided)

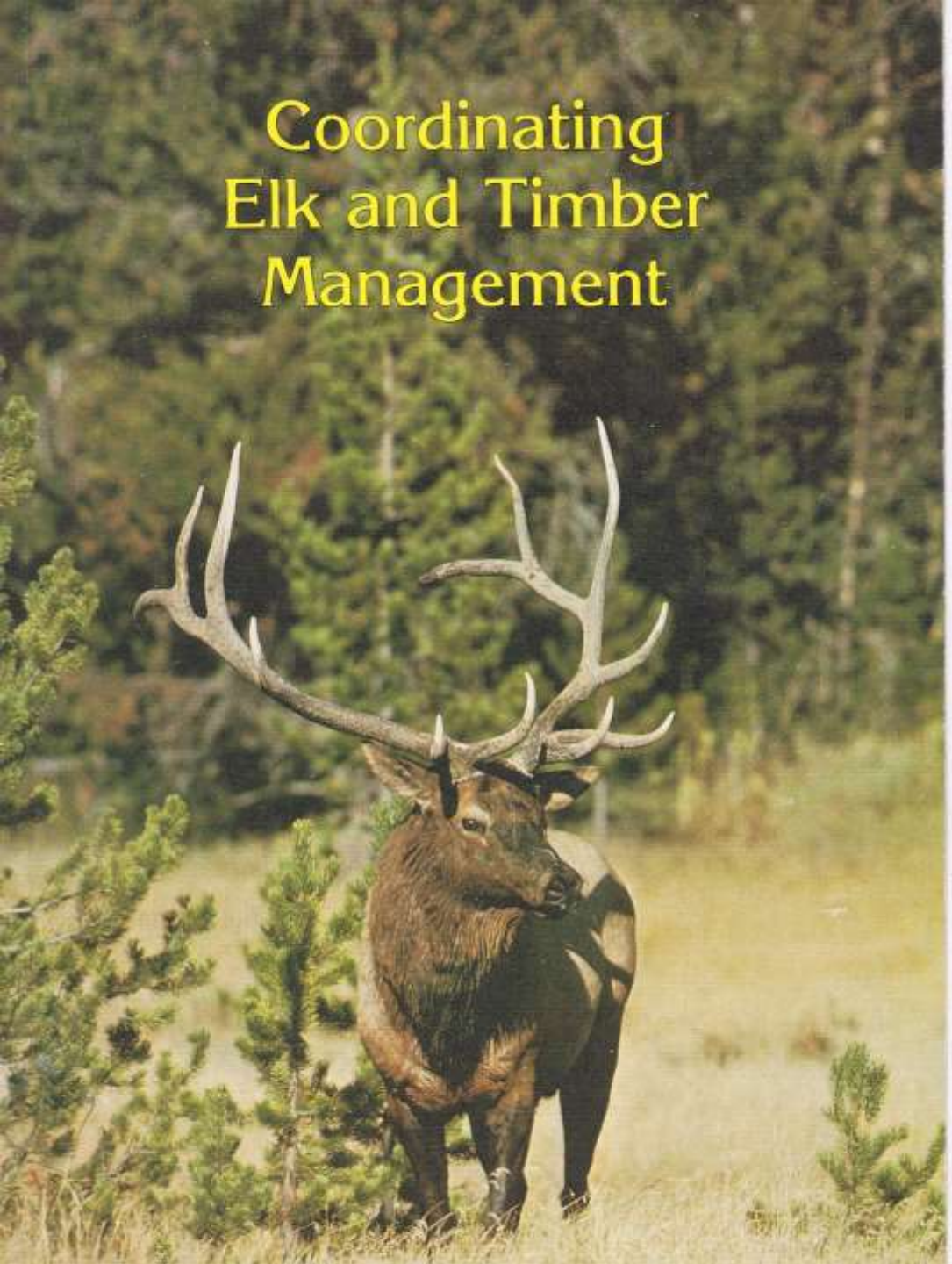
The HNF has now decided to create a new Security Standard without scientific data to show that the substitute is valid.

Evolution of Proposed Security Standard

1. 1986 HNF Plan based on Montana Cooperative Elk-Logging Study in Appendix C for recommendations and research findings on how to maintain adequate **COVER** during project work

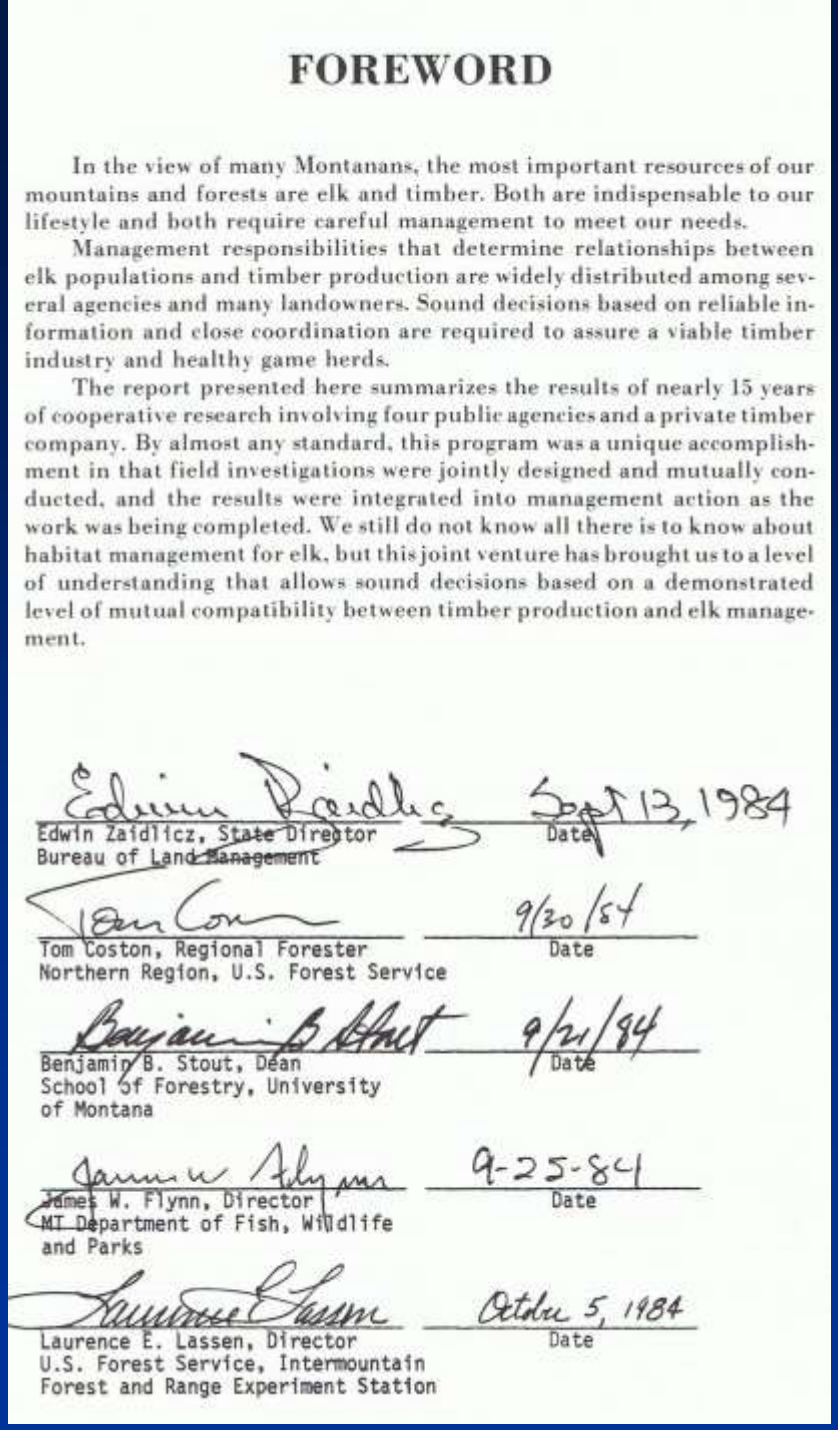
2. 1991 “Defining Elk Security: The Hillis Paradigm”

3. 2013 U.S. Forest Service and Montana Department of Fish, Wildlife, and Parks Collaborative Recommendations for Big Game Habitat Management on the Custer, Gallatin, Helena, and Lewis and Clark National Forests (MFWP and USDA Forest Service 2013)



"ELK/LOGGING GUIDELINES" 1984

15 Years of Research
by
5 Agencies and
Private Timber Co.
In
Seven Research
Areas both East and
West of the
Continental Divide



FOREWORD

In the view of many Montanans, the most important resources of our mountains and forests are elk and timber. Both are indispensable to our lifestyle and both require careful management to meet our needs.

Management responsibilities that determine relationships between elk populations and timber production are widely distributed among several agencies and many landowners. Sound decisions based on reliable information and close coordination are required to assure a viable timber industry and healthy game herds.

The report presented here summarizes the results of nearly 15 years of cooperative research involving four public agencies and a private timber company. By almost any standard, this program was a unique accomplishment in that field investigations were jointly designed and mutually conducted, and the results were integrated into management action as the work was being completed. We still do not know all there is to know about habitat management for elk, but this joint venture has brought us to a level of understanding that allows sound decisions based on a demonstrated level of mutual compatibility between timber production and elk management.

Edwin Zaidlicz — Sept 13, 1984
Edwin Zaidlicz, State Director
Bureau of Land Management — Date

Tom Coston — 9/30/84
Tom Coston, Regional Forester
Northern Region, U.S. Forest Service — Date

Benjamin B. Stout — 9/21/84
Benjamin B. Stout, Dean
School of Forestry, University
of Montana — Date

James W. Flynn — 9-25-84
James W. Flynn, Director
MT Department of Fish, Wildlife
and Parks — Date

Laurence E. Lassen — October 5, 1984
Laurence E. Lassen, Director
U.S. Forest Service, Intermountain
Forest and Range Experiment Station — Date

Elk/Logging Guidelines

Signed by:

BLM

USFS Northern Region

USFS Intermountain Forest & Range Experiment Station

School of Forestry UM

MFWP

Elk/Logging Guidelines

There has been no other research that has achieved this level of detail or duration

-15 years of research

-70 research papers

REFERENCES
Cited in Elk/Logging Guidelines

"This reference and citation list includes all papers and publications produced by the Montana Cooperative Elk-Logging Study through the fall of 1984."

REFERENCES

This reference and citation list includes all papers and publications produced by the Montana Cooperative Elk-Logging Study (indicated with an asterisk) through the fall of 1984.

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From Elk/Logging Guidelines

"Prescriptions for maintaining productive elk habitat now include both the physical components (thermal COVER, hiding COVER, foraging areas) and some components related to elk behavior within the physical environment (COVER interspersion, road density, livestock management, and traditional use)." Page 48

Elk-Logging Guidelines Recommendations

"The current recommendations represent a tested and successful composite and are intended as guidelines in the planning and conduct of long-term forest management to maintain elk populations, elk hunting, and timber production."

Elk-Logging Guidelines
Eleven Recommendations {15 pages)

1. Security during logging operations
2. Redistribution of elk
3. Traditional home range use by elk
4. Road construction and design
5. Road management
6. Area closures during the hunting season
7. Clearcuts
8. Cover type
9. Moist sites
10. Elk/Cattle relationships
11. Winter ranges

Elk-Logging Guidelines
Recommendation 1 - Security

Security during logging operations

Preparation of timber sales in elk summer range should include planning to **attain minimum losses in habitat security** during the period of road construction and logging

Elk-Logging Guidelines
Recommendation 2 - Redistribution

Redistribution of elk

Timber sales should be planned in a manner that **minimizes potential** problems arising from temporal **redistribution of elk** onto adjacent or other nearby property.

Elk-Logging Guidelines
Recommendation 5 – Road Mgmt

Road Management

Where maintenance of **elk habitat quality and security** is an important consideration, open **road densities** should be held to a **low level**, and every open road should be carefully evaluated to determine the possible consequences for elk.

Elk-Logging Guidelines

- “Full utilization of available elk habitat does not occur where security is inadequate” (pg 42 ELG)

- “Security is important to elk year around…” (Allen 1977:200) and should be one of the basic considerations in elk habitat management.

HNF has not lived up to the Elk Security Standard in the existing Forest Plan

The original 1986 standards were based on published scientific information (references provided)

The HNF has now decided to create a new Security Standard without scientific data to show that the substitute is valid.

Existing Big Game Standards from HNF Plan 1986

1. On important summer and winter range, adequate thermal and hiding **COVER** will be maintained to support the habitat potential.

2. An environmental analysis for project work will include a **COVER** analysis. The **COVER** analysis should be done on a drainage or **elk herd unit** basis.

   (See Montana Cooperative Elk-Logging Study in Appendix C for recommendations and research findings on how to maintain adequate **COVER** during project work.)

Existing Big Game Standard from HNF Plan 1986

3. Subject to hydrologic and other resource constraints, elk summer range will be maintained at 35 percent or greater hiding **cover** and areas of winter range will be maintained at 25 percent or greater thermal **cover** in drainages or **elk herd units.**

Elk Herd Unit

1986 Helena National Forest Plan (Appx VI pg 5)

Elk Herd Unit: The total area used by a herd of elk in the course of one years movement from summer to winter range.

Existing Security Standard from HNF Plan 1986

- 4. Implement an aggressive road management program to maintain or improve big game security.
- To decide which roads, trails, and areas should be restricted and opened, the Forest will use the following guidelines developed with the Montana Department of Fish, Wildlife, and Parks (MDFWP). The Forest visitor map will document the road management program.
  - a. Road management will be implemented to at least maintain big game habitat capability and hunting opportunity. To provide for a first week bull elk harvest that does not exceed 40 percent of the total bull harvest, roads will be managed during the general big game hunting season to maintain open road densities with the following limits.

Existing percent hiding cover According to FS definition of Hiding cover1	Existing percent hiding cover According to MDFWP definition of Hiding cover2	Maximum Open Road Density
45	80	2.4 mi/sq mi
49	70	1.9
42	60	1.2
35	50	0.1

1 A timber stand which conceals 90 percent or more of a standing elk at 200 feet
2 A stand of coniferous trees having a crown closure of greater than 40 percent

- The existing hiding cover to open road density ratio should be determined over a large geographic area, such as a timber sale analysis area, a third order drainage, or an elk herd unit.

Evolution of Proposed Security Standard

- 1986 HNF Plan based on Montana Cooperative Elk-Logging Study in Appendix C for recommendations and research findings on how to maintain adequate **COVER** during project work

- 1991 “Defining Elk Security: The Hillis Paradigm”

- 2013 U.S. Forest Service and Montana Department of Fish, Wildlife, and Parks Collaborative Recommendations for Big Game Habitat Management on the Custer, Gallatin, Helena, and Lewis and Clark National Forests (MFWP and USDA Forest Service 2013)

Perversion of the Hillis Paradigm

The [HNF] amendment **derives** from the "Hillis Paradigm" (1991) and adopts specific guidelines for its application from the U.S. Forest Service and Montana Department of Fish, Wildlife, and Parks Collaborative Recommendations for Big Game Habitat Management on the Custer, Gallatin, Helena, and Lewis and Clark National Forests (MFWP and USDA Forest Service 2013)

(HNF Divide Travel Plan August 2015)

Clarification

J. Michael Hillis, Michael J. Thompson
Jodie E. Canfield, L. Jack Lyon
C. Les Marcum, Patricia M. Dolan
David W. McCleerey

DEFINING ELK SECURITY: THE HILLIS PARADIGM

ABSTRACT

Elk vulnerability may be reduced, and hunter opportunity may be increased, by providing security areas for elk during the hunting season. We define security area requirements for land managers so that timber harvest decisions can reflect elk security needs.

To provide a reasonable level of bull survival, each security area must be a nonlinear block of hiding cover ≥ 250 acres in size and ≥ one-half mile from any open road. Collectively, these blocks must equal at least 30% of the analysis unit. Vegetation density, topography, road access, hunter-use patterns and elk movements are variables that must be considered when applying these guidelines. Examples are provided that illustrate how the security guidelines are applied in the field.

Pieces of the Hillis Paradigm have been embraced, while some of the necessary criteria have been abandoned.

Clarification
What is the Hillis Paradigm?

Components:

- 30% of an EHU (defined by the elk herd home-range) must provide COVER and provide for elk habitat needs through the 5-week hunting season
- Roads must avoid certain areas
- Minimum cover patch size is 250 acres; larger is better
- Cover patches should be ½ mile or more from open roads

Perversion of Hillis et al.

The Proposed Security Standard uses only parts of the Hillis Paradigm:

- 250 acre patch size minimum but calls it "Intermittent Refuge Areas" (only **IF** cover exists at all)
- Proposal does *not require any cover* in designated "Security Area" polygons drawn on the Forest map
- Proposal does *not require* cover across habitat needs during hunting season
- Does *not require* 30% of the EHU to be Hiding Cover as does Hillis et al.

*

The Proposed Security Standard abandons foundational issues of the Hillis Paradigm:

We developed guidelines from the following background of knowledge:

1. **Elk behavior changes in response to the hunting season** (Marcum 1975; Morgantini and Hudson 1979, 1985; Canfield 1988; Lyon and Canfield 1991)
2. Elk avoid areas adjacent to roads with vehicular traffic, especially during the hunting season (Marcum 1977, Perry and Overly 1976, Lyon 1979, Irwin and Peek 1983, Lyon 1983, Lyon et al. 1985, Lyon and Canfield 1991).
3. **Elk spend more time in dense cover during hunting season than they do before the hunting season** (Marcum 1975, Irwin and Peek 1983, Canfield 1988). Large cover blocks contribute to security more than small blocks (Canfield 1988, Lyon and Canfield 1991).
4. **Elk movements generally are confined to habitats within a traditionally used home range** (Edge et al. 1985, Lyon et al. 1985, edge et al. 1986).
5. Road closures may either increase or decrease elk vulnerability depending upon the **influence of cover,** topography and hunting pressure, both within and adjacent to the security area (Basile and Lonner 1979, Lyon et al. 1985).

*

Proposed NEW Security Standard

"The proposed amendment decouples hiding cover from security during the hunting season"

ie. **NO COVER NECESSARY** -- by proclamation of HNF

"The assumptions built into the existing (1986) Forest wide Standard 4a have not proven useful in guiding management activities under the Forest Plan… Elk numbers have consistently increased during this time period and the **existing standard needs to be revised to address recent elk management challenges**."

- USFS Divide FEIS Appx F Pg 808

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Objectors contend…

- That in fact, elk management has become increasingly challenging for FWP because cover on National Forests has decreased and roads have increased.
- Forests need to be managed to hold elk on public lands
- This will entail restoring forests that provide appealing habitat for elk thus assisting FWP in managing elk populations where they can be hunted on public lands.
- It does NOT mean banishing COVER from the definition of elk security

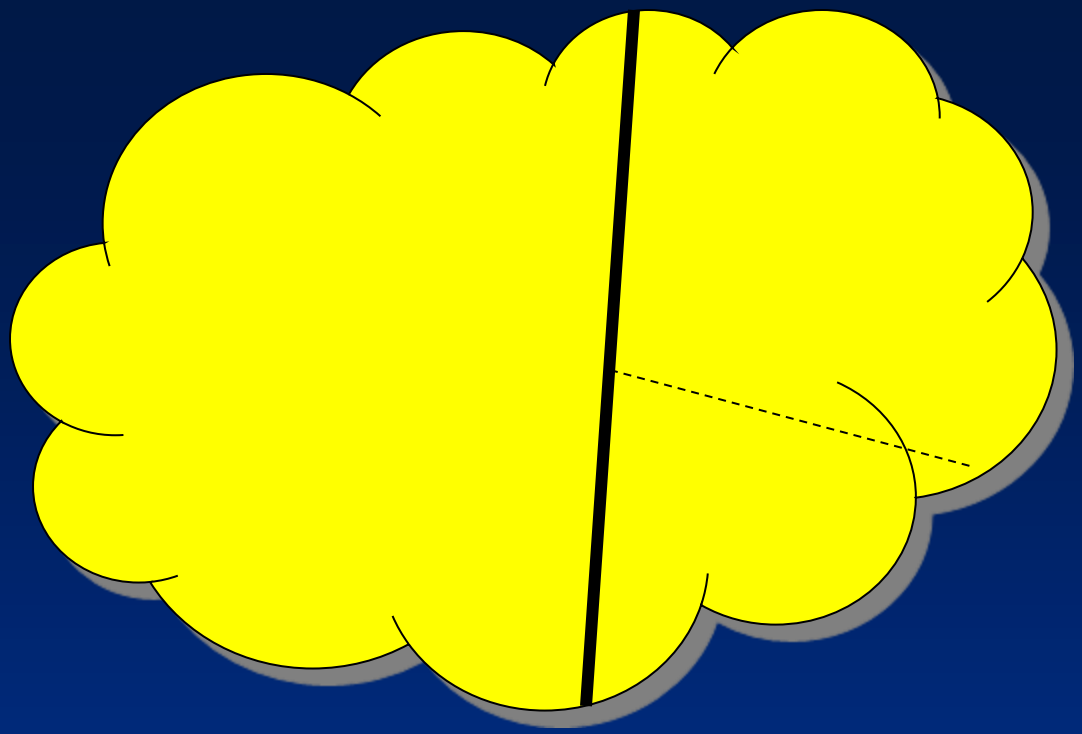
*

Where do elk go when cover declines on public lands?

- ANSWER: To private unhunted lands
- HHAA: *“Denuding public land security pushes commercialization of wildlife into the hands of those who would ‘Ranch for Wildlife.’ If they haven’t already, Montanans will soon realize that what happens to public lands will determine where public wildlife will end up, and whether they are privatized.”*

ELK HERD UNITS are the basis of ALL Wildlife Standards

- **Elk summer range** will be maintained at 35 percent or greater hiding COVER in drainages or elk herd units.
- **Elk winter range** will be maintained at 25 percent or greater thermal COVER in drainages or elk herd units.
- **Elk fall security** is based on existing hiding cover to open road density ratio across an elk herd unit.



ELK HERD UNIT

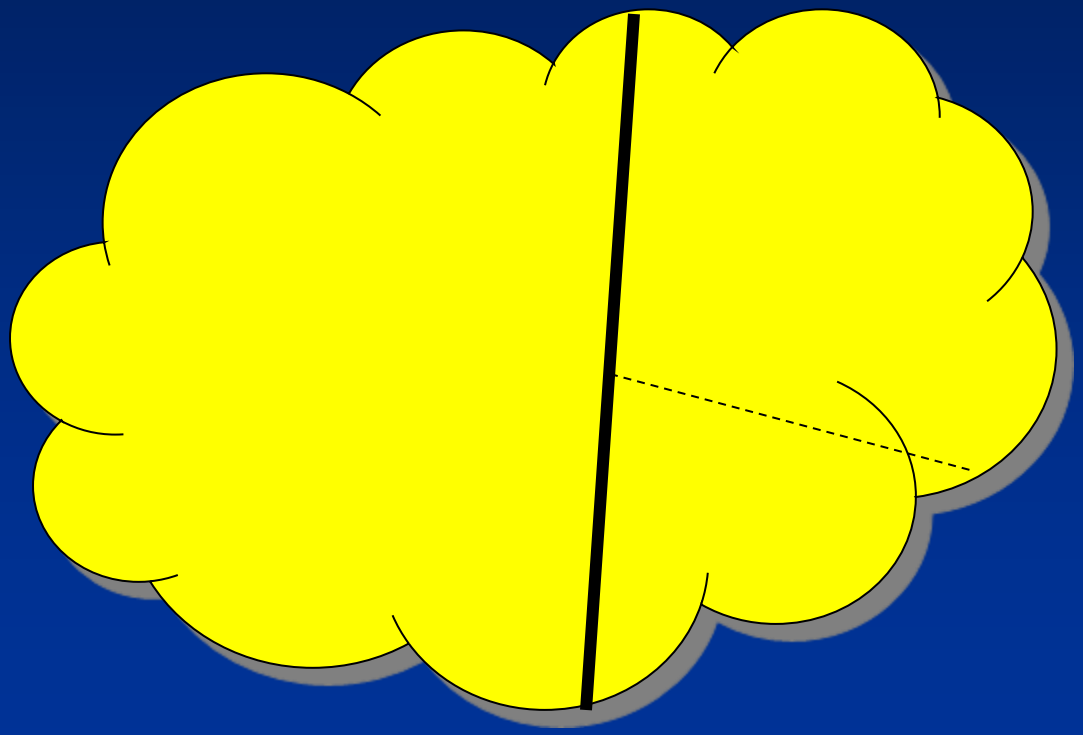
- To right of the line is HNF -- all in forest cover.
- To right of the line is 35% of the EHU.

- To left of the line is private or other ownership that has little forest cover.

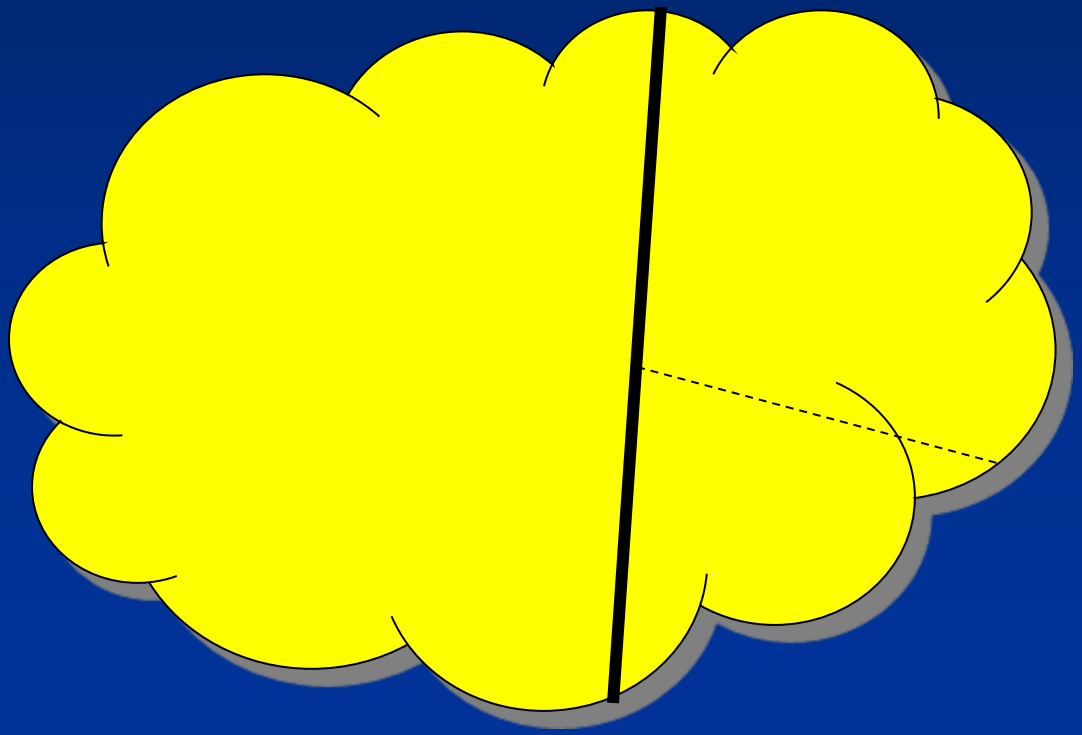
- Currently, the <u>entire</u> EHU falls within the current forest plan standard for hiding cover for an Elk Herd Unit and requires retention of all forest cover because it constitutes 35% of the EHU.

ELK HERD UNIT (EHU) EXAMPLE:

IF the FS no longer recognizes entire EHU and analysis occurs only “within the Administrative HNF Boundary”, then below the dotted line would be 35% of total forest cover, or only 12% of EHU.



The Proposed amendment would allow hiding cover on the right side to be dramatically reduced, to 35% within the **Administrative Boundary**.



ELK **ANALYSIS** UNIT =
EAU NOT EHU

That “slight-of-hand” maneuver from EHU to EAU would drop the security level for the elk herd unit to about 12% -- well below the Hillis Model requirement for at least 30% forested cover -- abandoning the level of security that elk require.

And yet, the proposed security standard, even though it references the Hillis Model, does not apply all the criteria that the wildlife biologists who developed the Model required:

- *At least* 30% of EHU in security cover

Larger is better—To meet the hunting opportunity objectives outlined here, managers should strive to retain, perpetuate, or replace the largest security areas possible.

security areas should cover a wide elevational range so they are available to elk under various weather conditions

* *At least* ½ mile from roads

Cover and terrain—When cover is poor and terrain is gentle, it may require a distance >one half mile from open roads before security is effective. In such situations,

* EHU reflects area used by elk (not an artificial boundary)

be biologically meaningful, analysis unit boundaries should be defined by the elk herd home-range (Edge et al. 1986), and more specifically by the local herd home-

Literature **Against** using only "Administrative Boundary" for Security Analysis of EHU

- Edge et al. (1986) recommended using elk herd unit home ranges as the basic land unit for elk management.
- Hillis et al. (1991) recommended using the local herd home range during hunting season as the ideal basis for analyzing elk security areas.
- MFWP-USFS Recommendations for Elk Habitat (2013) recognize the entire EHU (not just "within the Administrative Boundary") for security and cover

The "No Cover" Security Amendment Won't Work

- The Forest says that summer hiding cover will meet the needs of big game for the whole year.
- But the TSH project further reduces Summer Hiding Cover

“Summer” Cover is Not Enough

- Most summer hiding cover provided from the Summer Ranger Standard (35%) is in drainage heads, and often unavailable during fall due to snow.

*

EHU or EAU?

- A deceptive change of terminology appears to be occurring:

  From: Elk Herd Unit (**EHU**)

  To: Elk Analysis Unit (**EAU**)

- This terminology change would cement reducing important elk herd units from their natural range to analysis only within an “Administrative Boundary” (EAU)

*

“Summer” Cover is Not Enough

- The proposed standard has no requirement for COVER between the “Security polygons”

“Summer” Cover is Not Enough

- NO COVER would be required on hunted fall ranges.

“Summer” Cover is Not Enough

- **WHERE will elk go?**
  To unhunted private lands – defeating management efforts.

*

Conclusions from the Hillis Model

- "These guidelines were applied in to nine elk herd-units involving 14 timber sales.
- Two disturbing trends were discovered.
- First, most herd units already had less than the minimum 30% security due to past timber harvest; in many of these cases, there were strong indications that bull survival was declining or at risk.
- Second, even in situations where security was substantially less than 30%, all remaining security stands were targeted for timber harvest.
- This indicates that timber harvest decisions made over the next few years will potentially severely impact remaining security and, ultimately, hunter opportunity."

- These findings occurred only 5 years after the Lolo and Helena National Forest Plans came out – in 1986.

- Hillis et al (1991) found that: **“timber harvest decisions made over the next few years will potentially severely impact remaining security and, ultimately, hunter opportunity.”**

PROCEEDINGS OF A SYMPOSIUM ON ELK VULNERABILITY

Hosted by the Montana Chapter of The Wildlife Society

61 Publications by scientists from 12 states and 2 provinces

Number of papers stating that Elk on public land do not need cover for security: 0

Take Home Message:

“Planning must not only address the quality and spatial arrangement of existing security areas, but also must provide for the regeneration of replacement security areas where a sustained timber harvest is desired.”

(Hillis et al. 1991)

OBJECTION RESOLUTION

Our suggested over-arching remedy is:

1. to default to the existing forest plan standard 4a for big game security

2. at the same time, in the pending Forest Plan revision,

   a. evaluate the Forest's various landscapes' abilities to meet their respective biological potential to produce vegetation capable of providing hiding cover;

   b. then based on this information, establish a minimum percentage of each landscape's biological potential to produce hiding cover that would be important in meeting the security needs of big game;

   c. ultimately, greater than some minimum percentage of each landscape's biological potential to produce hiding cover, would be applied in conjunction with a prudently monitored and responsively managed transportation system.

[Taken from Wyoming F&G Recommendations by Jellison 1998]

Elk Need Security COVER

Photo Courtesy of EyeInTh